Student Work 1:

Final written project – JTC 210 news writing

Turn in sheet, basic guidelines

Final written story:

FORT COLLINS, CO–Inside a cozy cafe just on the corner of Elizabeth and City park, mother-daughter duo Cindy and Jordan Richards greet every customer with the warmest of smiles, and the encapsulating aura of freshly brewed coffee. For these two, owning a *Just Love Coffee Cafe* is more than just a business, but a heartfelt mission to foster connection and community within the city of Fort Collins every day.

Since they're opening in August of 2024, Just Love Coffee Cafe has become one of the most beloved local spots for all day breakfast, lunch, and dessert. Iconically known for its experimental, hand brewed coffee and signature specialty menu items, the cafe is both an intriguing culinary exposition, and a community gathering place. However, the story behind Cindy and Jordan's journey is just as rich as the coffee that they serve.

Cindy, who moved to Colorado as a child, and Jordan, who has lived in Fort Collins with her family all her life, have always dreamed of combining their collective love of coffee and service to others, and turning it into something meaningful. “We always thought that businesses can do more than just serve our customers,” Cindy says. “They can also serve as a place where people come together and give back to the community [we] all just love so much.”

Their Journey first began with an opportunity that aligned perfectly with their values and philanthropies: Just Love Coffee Cafes. Originally founded by Rob and Emily Webb in 2009, the brand was born out of a desire to make a difference, and find something bigger than them. After traveling to Ethiopia to meet their newly adopted children, the Webb’s combined Rob's passion for hand roasted coffee with their firsthand understanding of the hardships and struggles when going through the adoption process. It originally began as an online coffee shop dedicated to supporting small, local businesses, but after a lot of demand, soon grew into a thriving franchise of physical cafes all around the country.

The first in-person Cafe opened in Murfreesboro, Tennessee, back in 2014, with a mission to serve more than just great coffee. With new challenges, they decided to add an all day menu that featured yummy treats like waffle-ironed specials and gourmet breakfast sandwiches. Taking the community by storm, word spread fast, making the coffee shop one of the most popular spots in town. Former NFL player and Just Love Coffee franchise owner, Keith Bulluck, was inspired by Rob's mission, and went into business with him, opening up a location in Franklin, Tennessee. When interviewed by Charles Pulliam, Bulluck explains that “It was a no-brainer to do business with someone like that in terms of actually following through and launching this idea and being here and being a part of this community again.” After sharing his experiences, Bulluck sparked other entrepreneurs to open up their own shop, eventually catching the eye of Cindy and Jordan all the way in Colorado. They loved the vision of creating a welcoming space for meaningful connections, and decided to bring the love to Fort Collins, searching to recreate the company's warm and welcoming atmosphere. Through the love that they show everyday, they strived to bring communities together as people came to try out perfectly crafted drinks and the delicious food that awaited them.

The cafe undeniably reflects Just Love Coffee's mission by being a catalyst for love and community. “It's awesome to know that we're not just selling coffee or food,” Jordan says. “It feels like we're creating a space for people to feel seen, valued, and connected. It's just a really awesome way to bring people together.”

Cindy and Jordan's commitment to their community goes beyond their cafe's walls. They spent years of their life volunteering with several organizations like National Alliance on Mental Illness (NAMI) or Habitat for Humanity where they combine service and business practices into one. “We always thought that businesses can do more than just serve our customers,” said Cindy. “It can also serve as a place where people can come together and give back to the community that we all love so much and that we all want to make better.”

With Habitat for Humanity, they helped build a home for a single mother in need, a project Cindy describes as “a very rewarding experience.” with NAMI, they facilitated the family-to-family program, and educated people on mental health recovery, offering hope to families who are navigating challenging situations. “We've seen firsthand how these programs can change people's lives, and completely redirect them in a positive way,” Jordan explains. “ That's the kind of impact we want to make, and continue to make in our community.”

The cafe has undoubtedly begun to make its mark on Fort Collins, and the hearts of the people living there. Regular customers rave about the cozy atmosphere, unique menu offerings, and the most popular part–handcrafted drinks. The community-focused approach has also made the cafe a hub for local events that foster connections among neighbors, family, and friends. “It's rare to see a business take so much time to really give back to their customers,” explains regular customer Katelyn Meyers. “It's just so nice to know that there are companies who genuinely care about the people that they serve, and that it's not just a one-sided relationship.”

When looking ahead, Cindy and Jordan have big dreams for their cafe, and the future Fort Collins. They plan to host charity events, partner with local organizations, and continue to find creative ways to give back. “We just want what's best for everyone in this community. We love them as much as they love us, and it's important to show that,” Cindy says.

For the mother-daughter duo, Just Love Coffee Cafe is more than just a business, but a way to live out their values and make a meaningful difference within their community. With every cup, treat, and smile they serve, they are living proof that coffee truly has the power to bring people together, one cup at a time.

Broadcast/radio story (60 seconds, includes soundbite):

Link to audio sample

Photo, cutline and credit:

Just Love Coffee Cafes signature waffles, captured by Kathryn Prerost

Sweeten your day with our signature Belgian waffle topped with whipped cream, chocolate drizzle and freshly cut strawberries. It's practically love at first bite! 🧇🍓✨

Social media posts to two different platforms:

Social Media Posts: Instagram

Just Love Coffee Cafe is visiting Social West Apartments with plenty of food and drinks for the residents! 🎉☕

Come by and enjoy our fresh signature brews and delicious snacks all served with a healthy portion of love! ✨💛

#JustLoveCoffee #FOCOCommunity #ApartmentLife #FortCollinsEats

Social Media Posts: Facebook

Sip into the season with Just Love Coffee! 🧣❄️

Our three new seasonal drinks are here to bring you the cozy comfort of the holiday season!

🌿Peppermint Mocha Latte – A minty and chocolate treat that warms the heart
🍪Cookie Butter Latte – Sweet and smooth with a hint of spice
🥚Eggnog Latte – A creamy yet festive cup of cheer

Swing by and taste the joy in every sip – Available for limited time

Order online to skip the line 👇
Order Now

PR pitch and summary:

Pitch:
Mother-Daughter duo have turned their shared love of coffee and community into a thriving local coffee shop that focuses on philanthropic efforts in order to help give back to their community.

Summary:
In a society where coffee shops are normally just a quick stop during the day, Fort Collins' Just Love Coffee Cafe is breaking that mold. Mother-Daughter duo Cindy and Jordan Richards have combined their passions for coffee and community and transformed it into a bustling abode that's all about connection with others, and giving back.

Opened in August 2024, Just Love Coffee Cafe offers more than just hand-brewed coffee and fresh, gourmet meals. The cafe offers a welcoming atmosphere where coffee meets a mission to make a difference. The two have infused their personal values into their business, creating a space that embodies goals to serve their community with compassion.

The Richards' dedication to philanthropy is shown over and over again with their long standing work with different organizations like National Alliance on Mental Illness (NAMI) where they educate families about mental health issues, or Habitat for Humanity where they helped build a home for a single mother. They were inspired by the original values of the company founders, Rob and Emily Webb, who kickstarted the business as

a way to support families through the adoption process, all while running an online coffee shop tailored to help other small businesses. The duo wanted to bring the love to Fort Collins, and have recently opened an in-person shop. See how Just Love Coffee Cafe is strengthening Fort Collins. redefining what it means to be a local business

Advertisement (Newspaper):

Just Love Coffee Cafe: Brewing Love One Cup at a Time

If you're looking for a cozy abode to grab a delicious cup of coffee and a gourmet snack, stop by “Just Love Coffee Cafe” in Fort Collins. We serve more than hand-brewed specialty drinks and freshly made food – we serve the community.

Come try our fan favorite waffle-iron creation freshly made every day with a variety of toppings. Or sip on one of our newly added seasonal drinks like the cookie butter latte or our peppermint mocha which are crafted to make your holiday season even brighter.

Located right on the corner of Elizabeth and City Park, Just Love Coffee Cafe is more than a coffee shop, but a place for connection, kindness, and a little extra love with every bite.

Visit us today to see why your neighbors are calling us their new favorite spot in town!

Address: 1335 W Elizabeth St Suite #140, Fort Collins, CO 80521
Hours: 7 AM - 6 PM, Monday - Sunday
Follow us on social media @JustLoveCoffeeFortCollins

Student Work 2:

News Story

Jazmin Hope Virality: Hoping for Success

In the dimly lit garage of his childhood home, 21-year-old Jackson Dean grips his bass, the hum of the amp signaling the beginning of another rehearsal. With his band, *Jazmin Hope Virility*, on the cusp of their second album release, Jackson's story is one of dedication, raw talent, and overcoming personal struggles in the pursuit of stardom.

Jackson, a college senior studying music production, leads the three-member group as its bassist, songwriter, and producer. "Music is where I feel most myself," he shared during an interview after rehearsal. "It's the one place I can be free." For Jackson, that sense of self-expression came at a cost. Balancing school, family, and launching a music career hasn't been easy, but his determination shines through every time he plays.

The band *Jazmin Hope Virility* was born five years ago when Jackson, then 16, met singer Nurry Greer and drummer Vince Ortiz at a mutual friend's concert. The trio bonded over a shared love of surf rock and a vision for creating something new and distinct. Their initial jam sessions were raw and experimental, but it didn't take long for the three to find their sound. "The first time we played together, it just clicked," Vince recalled. "We were all on the same wavelength, and it felt like we could push each other to make something bigger. It was like finding the missing pieces to a puzzle."

The band's sound is a captivating blend of gritty riffs, powerful vocals, and catchy lyrics. Jackson's basslines form the backbone of their music, while Nurry's perfect pitch voice delivers the emotional punch. Vince's high-energy drumming adds a dynamic intensity that ties it all together. "We wanted to blend old-school surf rock vibes with a modern and harder edge," Jackson explained. "It's a balance between nostalgia and pushing boundaries."

Their unique sound caught the attention of David Shuken, a local community college professor and music enthusiast, who stumbled upon their performance at a local park after dark. "I saw something special in them," Shuken said. "It wasn't just their talent—it was their passion and drive. That's what really sets them apart." Shuken has been mentoring the group ever since, helping them refine their music and navigate the complexities of the music industry. Shuken also allows the boy to use the recording studio and equipment at the college he works at. This college is also the inspiration of the first song they released, *Chain College* "Jackson's stage presence is magnetic," Shuken added. "He's fun to watch and is the glue that holds this group together."

While *Jazmin Hope Virility* has enjoyed moments of success, the road hasn't always been smooth. Creative differences, financial pressures, and balancing personal lives with musical ambitions have tested them. "We're all opinionated, but that's what makes our music better,"

Jackson admitted. “We all have strong opinions about the music,” Jackson admitted. “But that’s part of what makes our sound unique. We push each other to be better.”

On a personal level, Jackson’s journey has been shaped by both struggle and growth. Music became an emotional lifeline during his high school years, a time when he struggled with mental health and social isolation. His mother, Joni Dean, reflected on the challenges her son faced growing up. “Jackson has always been a quiet kid. In high school, he struggled with his mental health and friendships,” she said. “It was hard to see him go through that, but music became his outlet. It gave him a voice and a way to express himself. It also brought him his best friends and nothing has made me prouder than seeing those boys connect and become each other's family.”

The garage where the band started practicing became more than just a space for music—it became a sanctuary for the boys. Joni supported her son’s passion by allowing late-night rehearsals and offering encouragement every step of the way. “There were nights when the noise was overwhelming,” she laughed. “But it was worth it to see his passion grow. I always wanted to give them the space to create and just be themselves.”

For Jackson, the band has been more than a creative outlet; it’s been a lifeline. “Nurry and Vince have helped me come out of my shell,” he shared. “They’ve become more than bandmates—they’re my brothers.”

The band’s breakthrough came with their debut single, *Chain College*, which gained traction on local radio and streaming platforms. The song, a gritty anthem *Chain College*, resonated with local audiences for its relatable lyrics about suburban monotony and self-discovery. “We wrote it in one night,” Jackson said. “It’s catchy, and even my little sister sings it—and she’s a hardcore Harry Styles fan,” he joked.

The success of *Chain College* opened doors for the band, leading to gigs at larger venues and opportunities to collaborate with other artists and even planning a tour. However, the band remains grounded. “It’s surreal to see people singing along to our songs,” Nurry said. “But we’re still just three guys making music that we love.”

Now, with their second album set to release this spring, *Jazmin Hope Virility* is ready for even greater success. The album promises to showcase their growth as musicians and as a band. “This album is more personal,” Jackson said. “We’ve poured our hearts into it, and I think people will hear that.”

The band has already begun planning their first tour, which will take them to cities across the West Coast. For Jackson, the dream isn’t about fame—it’s about connection. “When we make music, it’s like we’re creating something bigger than ourselves,” he said. “That’s what it’s all about.”

As the band packs up their gear after another late-night practice, Jackson takes a moment to reflect. “It’s been a crazy journey,” he said, his bass slung over his shoulder. “But really this is just the beginning for *Jazmin*.”

With a determined smile, he steps out of the garage and into the night, ready to chase the next chapter of his dream.

Photo, Cutline and, Credit

Jackson Dean rehearses with *Jazmin Hope Virility* in his family’s garage in Oakland California, December 2024. The trio is preparing for their second album release and first West Coast tour, set to kick off this spring.

Photo Credit: Sydney Maurer

Social Media Posts

Instagram

Photo would be the candid below
Caption: Meet *Jazmin Hope Virility*, the up-and-coming rock band that's turning heads with their unique surf-rock vibes. 🎸 Their new album drops this spring, and a West Coast tour is just the start. Stay tuned!
#JazminHopeVirility #ChainCollege #NewMusic #RockOn

Twitter
🎶 Rising stars alert! Local band *Jazmin Hope Virility* is making noise with their debut hit *Chain College* and prepping for their second album. Catch them on tour this spring! 🎸✨ #NewMusic #RockBand

PR Pitch and Summary

"Local band *Jazmin Hope Virility* is redefining surf rock with a modern edge. Their upcoming album and West Coast tour showcase their growing impact on the indie music scene."
This story aligns perfectly with organizations such as Spotify and their local colleges music program that support indie music and young artists. By highlighting the band's innovative sound and rock origins, this profile demonstrates the value of fostering local talent and engaging diverse audiences. For the venue, partnering with the band for a release event could bring in enthusiastic crowds, while a streaming service could amplify the band's reach to new listeners, emphasizing its role as a platform for rising stars.

Advertisement

Student Work 3:

Mashal Reha
Professor Abu Taib Ahmed
Class: JTC news writing
Date: December 10, 2024

Final Written Story

"A Muslim Woman Can Also Be A Feminist"
A Profile of Heleena Kakar

(this story is purposefully referring to her by her first name)

Trying to paint a picture of Heleena Kakar is like trying to weave a Khal Mohammadi tribal rug. There are thousands of strands with different designs and colors in each section, all needing the strongest knots to keep their shape, but when you stand back and look at the rug, you see a masterpiece.

Heleena Kakar is a strong women's rights leader who grew up in Kabul, Afghanistan, and experienced all of the political turmoil from the end of the Soviet controlled era, through the emergence of the Mujahideen, into the Taliban control after the various civil wars, and throughout the United States led NATO period of nation rebuilding.

Working for the Afghan government in August of 2021, Heleena also experienced the most recent nation change when the Taliban took control of the country yet again. She volunteered in refugee camps with groups like the IOM, the IRC, and US military teams to help refugees before moving to Colorado in early 2022.

As a recent Afghan transplant to Colorado myself, I was surprised to see such a successful woman from my country not living on either coast of the US where most Afghans have relocated.

The threads of Heleena have many colors, from feminist activism and human rights work, to public speaking, consulting and program management, as well as foreign relations, counter-narcotics work, and even international sports competition.

As an educated woman, she has obtained a degree in Computer Science from Herat University, a Master's degree in International Politics from India, and a special Master's in Sport Management from Switzerland.

Speaking with her younger brother Atiqullah, a freshman student at Colorado State University, he describes looking up to his big sister from his earliest memories as a refugee in Pakistan during the Taliban regime.

Despite their situation, Atiq remembers how she was constantly a hard worker who constantly fought for her dreams through education and "bravely studied subjects that most other young women were not attempting."

Heleena states, "Being a woman from Afghanistan I have faced many problems and challenges to be who I am right now and to have my own identity. I fought for my basic rights (*Education and Work)*, despite the fact of many struggles."

Heleena doesn't go into much detail about these struggles, and like many Afghan refugees, she is focused on constantly building for the future; what is needed, what is being done, and what can be achieved. Not just for Afghans, but for all women and those who are in need of an advocate.

When I look at Heleena, I see a cut tourmaline stone with many shining facets that face defiant outward while shining on the world around her. Each face of Heleena's stone represents a different aspect of her hard work.

She has ***ambitiously*** involved herself in a multitude of activities and does not let an opportunity to do something go by. Her ***energetic*** passion is obvious, and it shows through her work, both past and present.

In Afghanistan she has worked ***conscientiously*** in leadership roles with the government including the State Ministry for Peace and as a Director in the Ministry of Counter-Narcotics (MCN), working directly with the United Nations Office on Drugs and Crime (UNODC).

Fort Collins resident "Chris" (who did not wish to be named in this story) remembers visiting both the MCN and UNODC in 2013 on an intelligence assignment and seeing an ***industrious*** twenty-something year old woman "holding court over groups of men, not just being a contributor." He also mentions how Heleena and others like her provided moments of hope during the middle years of US involvement.

Along with starting her own charity, the Third Thought Organization, Heleena also started Afghanistan's first feminist magazine, ***RUIDAD***. When asked what inspired her to create ***RUIDAD***, Heleena says, "At age 17, I traveled to a different province of Afghanistan, Herat, to pursue my B.A in computer science. I used to stay in a dormitory, being young, alone and far from family in a very conservative society. I faced many challenges and difficulties and I deeply understood the challenges of other girls my age and the mentality of society toward girls and women."

She used this time to reflect on how these struggles helped her to "raise my voice and share my opinion with girls who were sharing their problems. I wanted them to be their voice, which made me think of establishing **RUIDAD** and educating girls about their rights while building a strong network to have each other's backs."

RUIDAD quickly became known as Afghanistan's first feminist weekly publication covering topics such as women's autonomy, family life, and ending domestic abuse, and this sparked many international media outlets to label Heleena as Afghanistan's 'First Feminist'.

In an early 2012 interview with Firstpost.com, she made the groundbreaking statement, ***"A Muslim woman can also be a feminist."*** This was almost unheard of to say in an Islamic country like Afghanistan, even in the middle of the western involvement.

When following up with her on how she overcame the challenges of doing this in such a difficult environment, Heleena responded, "Being a feminist and educating other women in Afghanistan is not an easy job, it is not overcome completely, and daily you have to fight for your rights, hence we established **RUIDAD**, built the network, and continued the great work but always faced new challenges down the road."

The success of **RUIDAD** further introduced Heleena to work and consulting with several global groups, including the UK based FRIDA, and Front Line Defenders.

These have brought her into the world of working with other refugees like herself, and now that she is in Colorado, Heleena reflects, "My journey as a refugee started within my country, I left Kabul to Mazar and then Mazar to Doha-Qatar, and from there I landed in the USA.

The journey educated me more deeply about being a refugee and this means. During the process of evacuation, I learned about the reception of the host community too."

These new challenges have helped to transform Heleena's advocacy. She has added being a "Refugee advocate on top of being a woman advocate too, hence I shape my career to work in the USA to support refugees, especially women who are facing many problems to integrate into society."

Living in Denver, Heleena has joined the ECDC African Community Center where she can, “better help refugees [because they] are assets not liabilities.....and should be who they are, be recognized as human, not as a second element of society. I am hoping to see them back as successful as they were.”

When asked to talk about how this is rewarding for her, she shows her ***dedicated*** mindset of compassion while describing the satisfaction of seeing other refugees find their new home in Colorado while being treated equally during their resettlement.

She has also brought both refugees’ and women’s advocacy to her work as a consultant with MADRE, an international human rights organization and continues to support women at risk in Afghanistan by helping them to find underground educational opportunities and safe places in third countries.

How one juggles all of these positions is a question, and maybe Heleena taps into her athleticism and table tennis skills. As a child she was the first under 15 player in the country, and is also the President of the Afghanistan Table Tennis Federation.

Despite all of the work she is doing based in Colorado, the fact remains that women in Afghanistan are struggling deeper every day with more and more restrictions due to the Taliban’s *gender apartheid*.

So when asked what role young people, especially women, can play in shaping the future of Afghanistan, Heleena quickly redirects, “Before answering this question, let's first bring changes by men in Afghanistan. Men of the family, and women should start to bring changes from their family first, educate their brother, father, or husband. Also young people, including boys, should be equally responsible toward girls.”

This is a rare redirection, and even though it is a basic feminist practice, it was refreshing to hear her reframe the issue as being solely the responsibility of women.

She then continues, “Regarding shaping the future of Afghanistan, first young girls and women should continue their education. Only through education can we have a bright future in Afghanistan, so participation of young boys & girls is the only step toward the success of a country. By education, individuals will know their responsibilities toward their family and community.”

Since the West’s involvement in South Asia after 9/11, the world has seen a number of muslim women thought leaders become household names.

Women like Malala Yousafzai, Queens Rania and Noor, Ilhan Omar, Rashida Tlaib, and Mariane Satrapi tend to emerge in educated Americans’ minds, and it might not be too long before the name Heleena Kakar reaches their level.

Broadcast/Radio Story

Heleena Kakar Profile (click to listen to 60 second file)

Soundbite - A Muslim Woman Can Also Be A Feminist

Story Transcript - Heleena Kakar is a remarkable Afghan woman whose life reflects resilience and advocacy. Growing up in Kabul during decades of political turmoil, she fought for her education and identity despite societal barriers. With degrees in computer science, international politics, and sport management, Heleena became a trailblazer in women's rights, public service, and international relations.

She launched Afghanistan's first feminist magazine, **RUIDAD**, to empower women and advocate for their rights. Heleena also held leadership roles with the Afghan government, working with organizations like the United Nations Office on Drugs and Crime. After fleeing Afghanistan during the Taliban's 2021 resurgence, she relocated to Colorado, where she now supports refugees and women through advocacy and consulting roles.

From founding charities to inspiring change through education, Heleena emphasizes the need for both men and women to shape a better future. She embodies hope, determination, and a belief in education as the path to empowerment. Her story is one of perseverance, ambition, and an enduring commitment to human rights.

Photo, Cutline and Credit

A rare moment of relaxation during Heleena's daily visits for work at the ECDC African Community Center in Denver, Colorado. Getting messages throughout our interview, Heleena demonstrated the multi-tasking talents that have helped her reach many goals.
(photo courtesy of Mashal Reha)

Social Media Posts to Two Different Platforms

Instagram

Facebook

PR Pitch and Summary

Dec 10, 2024
Issued by: NooristaniNews.com
For Immediate Release
Contact:(+1) 970-803-4670 or Reha@colostate.edu

PR Pitch - Introducing Heleena Kakar: An Afghan and Tireless Advocate for Women's Rights and Resilience Now Assisting Refugees in Colorado.

FORT COLLINS, CO — Dear Colorado State University Office of International Programs Meet Heleena Kakar, an extraordinary Afghan woman whose journey of resilience, leadership, and advocacy has inspired countless lives. Growing up in Kabul amid political upheaval, Heleena defied societal barriers to pursue her education, earning degrees in computer science, international politics, and sport management. As the founder of **RUIDAD**, Afghanistan's first feminist magazine, Heleena amplified women's voices and championed equality. She held leadership roles with the Afghan government and international organizations like the United Nations Office on Drugs and Crime, becoming a trailblazer for women's rights and public service.

Following the Taliban's 2021 resurgence, Heleena relocated to Colorado, where she continues her mission by advocating for refugees and women's empowerment through education and policy consulting. Heleena's inspiring journey embodies perseverance, hope, and the belief that both men and women can work together to create a brighter future. Her voice is one the world needs to hear—offering a powerful narrative of courage, empowerment, and unyielding determination.

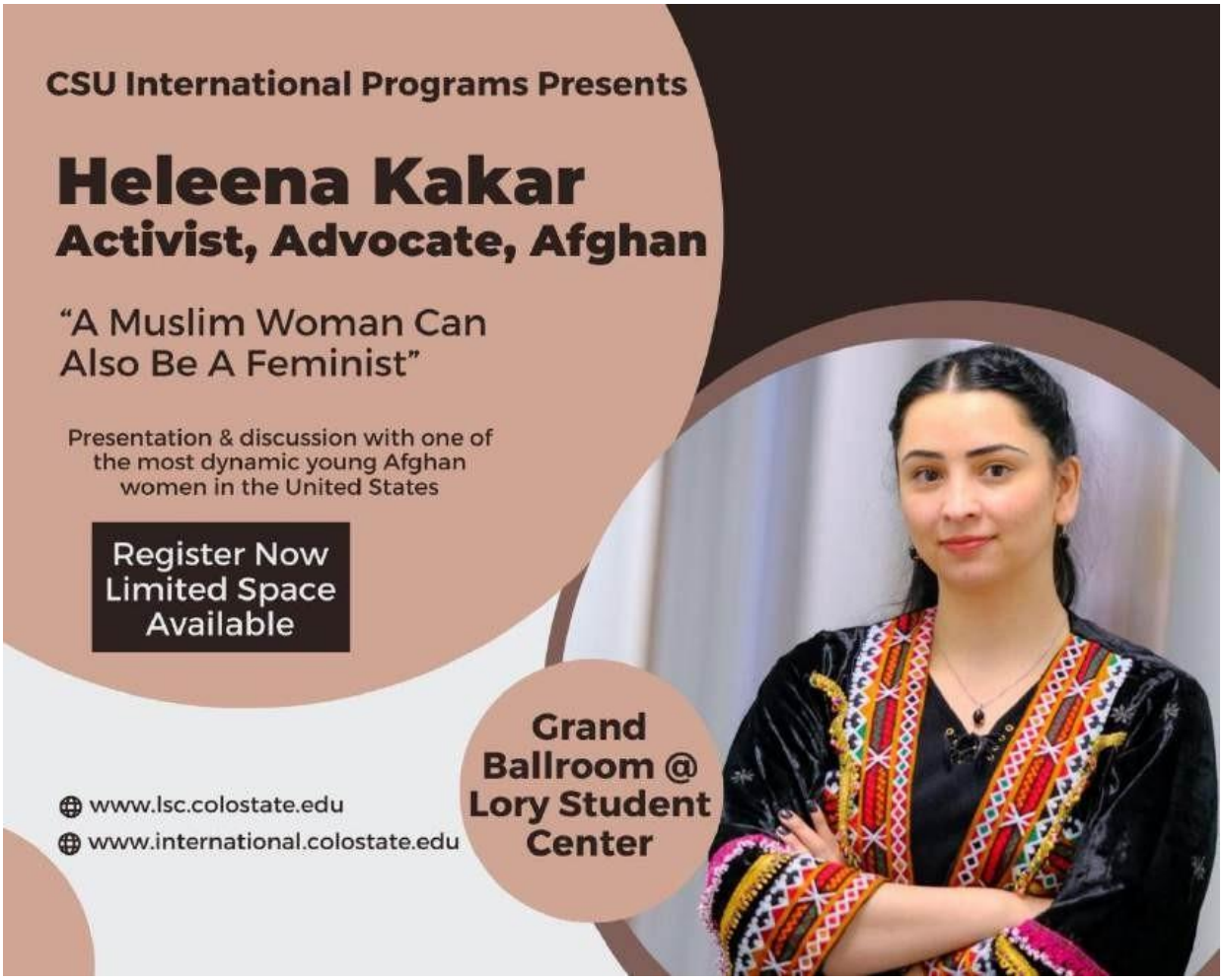
Call to Action:

Following OIP's mission to foster cross-cultural understanding through high-impact learning and community engagement, we'd love to connect you with Heleena for a feature story or interview. She's available to discuss topics ranging from women's rights in Afghanistan, refugee advocacy, and the role of education in fostering empowerment.

Looking forward to collaborating!

Mashal Reha

Advertisement



Student Work 4:

Zoe Ebert

Final Written Story

Depicting Diversity: How One Student Uplifted and Diversified Her Community

By Zoe Ebert

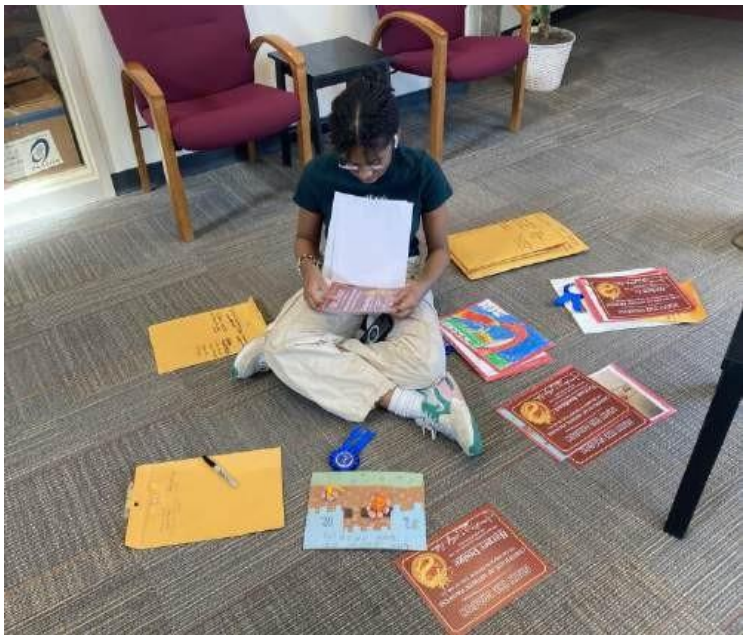
For most high school seniors, the biggest pressures in their lives are applying to colleges, getting ready for prom, or dealing with graduation. While it can be a stressful time, generally seniors have less responsibility in school, and just try to coast by until graduation. At Silver Creek High School in Longmont Colorado, however, some students have had much larger responsibilities.

Leigh Baker, who was a part of the High School graduating class of 2024, spent her senior year working on a demanding year-long project as a part of Silver Creeks Leadership Academy, also called SCLA. As well as taking numerous classes on leadership and project organizing throughout their High School experience, students a part of SCLA are responsible for organizing a year-long project to complete during their senior year of high school that requires the use of all of the skills they had been taught in classes previous. These projects must meet certain requirements of difficulty and fulfill a certain number of hours, as well as make an impact within their community. While Baker was far from the only student working on a project, hers was unique for its focus on cultural events, as well as the amount of work she put into it- being acknowledged by those around her as a stand out among the SCLA graduating class of 2024.

Baker's project was entitled ‘Diverse Depiction’, with an aim at uplifting and supporting diverse cultural events. “It involved my collaboration with various Longmont and Boulder cultural events.” Explained Baker, “I would help advertise, organize, and add fun activities to

these events and in the process expose the community to these cultures in an engaging and clear way.” She helped organize, set up, and host Lunar New Year, Martin Luther King Jr., and Dia de los Muertos events held in the community, providing an invaluable resource to diverse communities and supporting the overall Longmont community.

“My favorite part was probably working with children from the St. Vrain Valley School District on the Draw the Dragon Art Challenge for the Lunar New Year event.” Baker said, “Seeing as this year is the year of the dragon according to the Chinese zodiac, I created Draw the Dragon as a district wide art challenge to expose kids to various Asian cultures that celebrate the Lunar New Year. I received over 40 submissions from kids ages 3-17 and their work was displayed at Silver Creek High School.”



Leigh Baker organized awards to be sent out to children who submitted art for the Draw the Dragon Art Competition. These art pieces were displayed only days before at Silver Creek High School's Lunar New Year celebration.

Photo taken by Zoe Ebert

Baker was involved in the idea, planning, and execution of the Draw the Dragon Art Challenge. She awarded the kids who submitted and organized the display at the Lunar New Year event, where around 2,000 people would attend and have the opportunity to stop into her station. “It was amazing to see the creativity these kids have and the various ways that they interpreted the prompt with multiple art mediums,” She said, describing how they got submissions ranging from clay sculptures, to paper cut outs, to watercolor paintings and digital art.

Nora McCloy, a friend and fellow graduate of SCLA, expressed how Baker had gone “absolutely above and beyond the expectations of an SCLA student. In addition to running a project that was more in-depth than most, she was also a part of a number of advisory boards for SCLA, and often acted as an emergency volunteer.” She described how Baker had stepped up within the SCLA organization, helping organizer Carrie Adams on numerous occasions, as well as supporting others projects and the Longmont community.

Bushali Jain, another friend and graduate of SCLA, described how Baker had helped with her project's events as well- helping her to put on a showcase of Indian culture. “She was the reason that a lot of people’s projects were even successful.” According to Jain, Baker's drive to help uplift diverse communities and events led her to becoming an integral and incredibly valuable part of the cultural events held in Longmont during her senior year.

Baker also learned much from her project that she says she will carry with her going into college and the professional world. “I learned a lot about organizational practice and communication. Interacting with people from cultures and backgrounds different from my own

exposed me to different ways of thinking that are very valuable to me." She said, explaining how she had developed many organizational processes, had learned how to work well under stress and had become more punctual throughout the process.

She also described the help she got from her reliable support network in SCLA: "Pushing past my own insecurities and reaching out for help from my peers and mentors was extremely helpful so I could chart a course to better the situations." Baker attributed her success in her project to her connections within the community, and SCLA. Reflecting on her project, Baker realized that connection to the community is what drove her to choose the project she did, and her connection also ended up uplifting her and her project in the end, truly becoming the definition of giving back and being connected to her community in by way of her SCLA project.

Student Work 5:

Jace Willy News Writing Final Written Project

News Story

Young Angler Inspires Thousands on Fishbrain, One Catch at a Time

Miguel Ramirez, an 18-year-old fishing enthusiast from Denver Colorado, is reeling in more than just fish. He is capturing the attention of thousands of people on the social media fishing app called Fishbrain. Known for sharing his fishing catches and teaching techniques to young anglers, Miguel has turned his favorite passion into a platform for education and inspiration while gaining a mass following.

Miguel's journey began at age seven, when his father introduced him to fishing at local lakes and ponds. What started as a fun activity to go participate in during the summer, soon became a passion for him. "Fishing taught me patience and observation skills," Miguel said during an interview. "It's not just about what I catch when I go out, it's about the calming experience I get from fishing and what I learn while I'm doing it." During the following years Miguel began to spend a significant amount of his time outside fishing. Whether it be with friends, family, or alone, he was simply glad to be out. Once he got better at the sport, he was catching larger fish and started documenting them with photos and taking measurements and weights so he could remember his best moments on the bank.

He decided to start an instagram account where he could post his catches for his friends to see and hoped to gain a following there. As months passed he didn't see much progress so he knew instagram wasnt the app for his endeavors.

At the end of 2022, Miguel joined Fishbrain, a popular app used for posting locations of fish catches and connecting anglers worldwide. His posts on the app, which are mostly his catches, but also tutorials on using different lures and the bait choices he likes during different weather conditions have gained him over 4,000 followers. Living in Colorado, Miguel tries to post at least a couple times a week, but in the colder winter months it can be hard to stay consistent, he told me.

Miguel's strong impact goes farther than social media. He recently led a free fishing event at a small popular lake in Denver, teaching the anglers who showed up some tips while they fished for bass and trout. Going above and beyond, Miguel decided to give some of them the lures that he doesn't use anymore since they were mostly kids who were newer to fishing.

By fishing for over a decade, Miguel Ramirez has grown quite the collection of tackle. It ranges from massive northern pike lures down to micro flies smaller than a fingernail. He targets all of the fish species the state of Colorado has to offer, but his favorite species are the largemouth bass and the "wiper" which is an aggressive, hard fighting hybrid between the striped bass and the white bass. While fishing, he tends to snag up his lures a good amount, which at the end of the day costs him a lot of money.

One of Miguel's close friends, Bryan, who goes fishing with him often said "Miguel is pretty dialed in on knowing where the fish will be at certain times of the year." Bryan has gone fishing with Miguel many times over the years he has known him and now they both attend Colorado State University.

Miguel showing me a swimbait lure from his collection while interviewing him at his dorm on December 6. He used this lure to catch a 30 inch long northern pike earlier this year. Photo taken by me while my phone was on a tripod.

In the future, Miguel hopes to expand his following by partnering with fishing brands and making content for them. “I want to grow a larger influence on the sport of fishing to show more people and young kids how fun it is,” he said. He recently started a TikTok account with his friend Andrew where they post short videos of their catches along with descriptions of what happened while filming. Andrew has been fishing with Miguel since the start of the semester at the University and has learned a lot of new things from him, being from Texas. “Meeting Miguel was definitely a lucky thing that happened to me since I didn't know anyone else who liked to fish here coming into the year,” he said. While Miguel and Andrew’s fishing TikTok account hasn’t gone viral yet, they hope to get fortunate in the coming months.

Looking forward to winter, Miguel is excited for the coming ice fishing season. Every January and February he drives into the mountains and goes ice fishing on the frozen alpine lakes in search of rainbow trout, cutthroat trout, and brook trout. “If you know where to go on the lake, it's really easy to find the fish,” Miguel told me. Although he is now able to almost consistently find fish while ice fishing, it wasn’t always so easy. A few years ago he and his dad would drive up into the high elevation mountains to fish the lakes for trout. They ended up fishing five different lakes on two different days until they were finally able to get a bite. It was a challenge

because they had never done it before and had no experience finding fish under the ice. In between the two fishing days, they did a lot of research together on what to look for and where to go on certain bodies of water. In the end, this worked out tremendously and rewarded them with colorful trout they could take pictures with and safely release to swim another day. The pictures of that day now live online on Miguel's fishbrain account for all to see and enjoy.

Miguel is planning on fishing as many times a week as he can over the upcoming winter break from college. In the summer of 2023, he was able to fish anywhere from three to six days a week and is hoping that he can start up his fishing grind again soon.

With years of fishing experiences under his belt, Miguel continues to inspire the next generation of anglers. From his Fishbrain posts and tutorials to his growing online community, Miguel Ramirez shows how a passion for fishing and a positive message can make a lasting impact.

Script for Radio Story

Link to Audio Clip: https://youtu.be/2jf4rnXKWWA?si=QEGS7uGHZ7LRiP8o

Miguel: "It’s not just about what I catch when I go out, it's about the calming experience I get from fishing and what I learn while I'm doing it."

Me:

Meet Miguel Ramirez, an 18-year-old angler who has grown a large following on the social media app Fishbrain. With over 4,000 followers, Miguel shares fishing tips, tutorials, and his catches that inspire young anglers to pick up a rod and reel and get out fishing.

But Miguel's reach goes beyond the screen. Recently, he led a free fishing event at a small popular lake in Denver Colorado, teaching the anglers who showed up some tips while they were having a blast fishing for bass and trout.

Miguel: "There were about ten kids who showed up and I had a pretty good time teaching them some of the fishing knowledge I know''

Me: Miguel is also passionate about conservation. He hopes to be able to continue to teach kids online about fishing and someday have a bigger influence on the fishing industry.

Miguel: "It's important to protect the waters and the fish so angling will continue to be great."

Me: For more on Miguel's story and his passionate mission to educate the next generation of anglers, check out the news story or Miguel on Fishbrain.

Instagram Post: "A look into Miguel Ramirez's pike lures box, the 18-year-old fisherman teaching thousands of young anglers how to reel in their first catch. 🎣 Learn more about his success here (link)

Twitter Post: "Fishing isn't just a hobby for Miguel Ramirez, it's a strong passion that he shares with over 4,000 followers on Fishbrain. Read here how he's inspiring the next generation of anglers (link)

PR Pitch and Summary

Pitch:

Teen angler Miguel Ramirez inspires thousands on Fishbrain with fishing tips and angling

lessons. Partnering with Patagonia could grow his passionate mission to educate and help the next generation become more environmentally conscious anglers.

Summary:

Miguel Ramirez's story aligns with Patagonia because both the company, and Miguel's mission have the same goal in mind which is educating and aiding the youth who enjoy the outdoors. With a growing Fishbrain following and a love for teaching fishing practices, Miguel is the perfect ambassador to connect with younger audiences who are also passionate about outdoor activities.

A collaboration with Patagonia would ensure a wider outreach of potential customers seeing the company's products as well as one of their favorite fishing influencers wearing the clothes. This partnership could inspire the next up and coming generation of outdoor enthusiasts to wear sustainable outdoor clothing and develop a deeper connection with nature.

Advertisement

Student Work 6:

From Battlefield to Classroom: The Journey of a Single Mom

Fort Collins, CO- At just 25 years old, Sydney Reamy, a former military police officer, sails across the demands of military life while also raising her son as a single mom.

Motivated to protect and serve, Sydney said the military deeply shaped her perspective on life, “I learned to be grateful for everything and to never take anything for granted,” The military taught her that anything can be taken away from you.

Working as a military police officer, Sydney experienced many fields and combat training. She believed joining the military was a great steppingstone outside of high school. Being a police officer she worked closely with children.

Working with children and helping them adapt to better lifestyles is her passion for making a difference. Balancing the responsibility as a soldier and mother was not an easy thing to manage. Two out of her four years in the military, she had to send her son with a trusted babysitter.

Sydney says, “I didn’t have the best support”. Luckly, she found a babysitter that stepped in during difficult times. While she was deployed it was a struggle to find those who would take care of her beloved son.

Her schedule was always shifting, from working nights to doubles, her luck depended on the babysitter, no family or father figure was there to help. Despite the challenges, she made it clear that her son came first even if it meant facing consequences like Article 15 for calling out.

When this happened, she explained that this reflects the overall military career of an individual and if one were to receive many Articles 15’s getting kicked out or pay taken away was the only option.

“I had to recognize that I signed a contract” Sydney states, “I signed my life away” she reflects. She had the responsibility to determine how much she was able to take care of her son while also acknowledging that she was a soldier. However, when she was away for three months her parents stepped in and cared for their grandson.

After leaving the military, Sydney was inspired to go back to school to follow her passion in social work. “I want to work without the scary uniforms.” she says, wanting to build trust within children.

As a former military police officer, she had the opportunity to gain experience in family advocacy and children. This sparked an interest in helping those who do not get the best support. Becoming a student was her next mission.

The shift change from military life to civilian life has been different. “There’s more freedom in school, but I've also witnessed things I have to mentally overcome.” Sydney claims it’s still a challenge to do things that were not allowed in the military.

Sydney says, “I have to tell myself I can walk on the grass, that it’s okay too.” She is happy to be living closer to family and have a support system that she didn’t have while away.

Sydney states “It’s very different from the military life but having a great support system makes all the difference.” Now as a student she has to focus on managing her class schedule to fit her son's needs.

Sydney’s now 4-year-old son is starting kindergarten next fall where she has the responsibility to make sure her schedule aligns with when she is able to pick him up and drop him off. “I want to be the best mom I can be.”

Sydney’s mother, Michele Reamy says, “Having her closer to home is a miracle.” Having her daughter be away from home for four years can be heartbreaking. “I wish I was able to help more while she was away,” Michele states. Not knowing where your daughter is going to be located is an uneasy feeling.

Now holidays and family gatherings feel more complete, building stronger connections that were not there before is something that both Michele and Syndey are forever thankful for. As Sydney is in class her son is now gaining new experiences with his grandma and grandfather rather than a babysitter.

As a single mother who did not have the best support system, she wishes other single parents do not join the military unless they have the luxury of having people by their side.

Attending Colorado State University, Sydney wants to work in school suspension, “these kids are our future.” Becoming a role model and creating positive impacts on the kids is what she is passion about it.

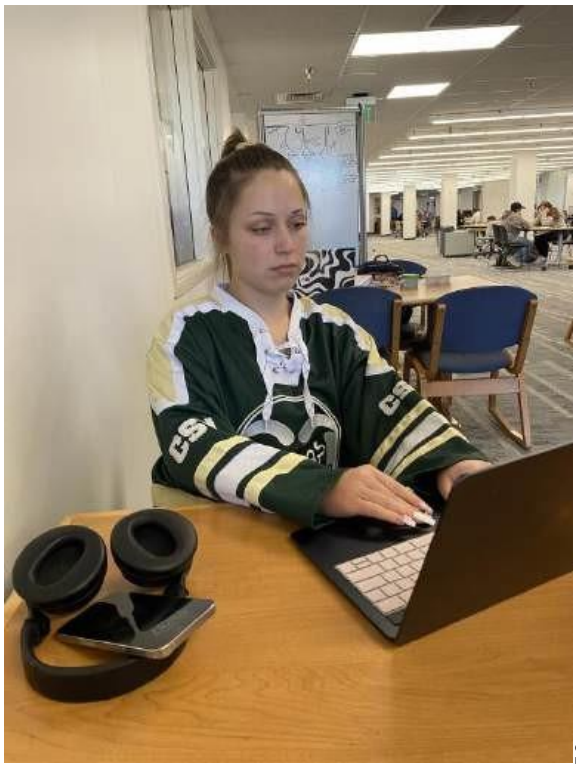
Mia Pink, a former classmate of Sydney, states Sydney made Anthropology more enjoyable and overall, a positive experience. Mia says, “When she told me she was a single mom, it made me have more admiration for her as a person.”

There were many takeaways from having a class with her, Mia says “She’s made me understand that no matter what your circumstances are, you can still very much accomplish your goals and work-life balance.”

Age differences and life situations are not seen when attending a university. Sydney is continuing to pursue her dream and becoming the best mom possible. “My goal is to watch him succeed in life.” Sydney states.

Broadcast Story

Radio News Story 1 1.mp4


Sydney Reamy is working on her study review at the Morgan Library. She is dedicated to doing well on her upcoming final exam.
(photo credit: Michelle Pisqui)

Social Media Posts: Instagram & Twitter (X)

PR Summary

Single Mom's Journey from Military to Education

Fort Collins, CO — This incredible story highlights determination and challenges Sydney Reamy has faced along the way.

A 25-year-old single mom who has changed over from serving in the army to following her dream as a social worker.

Now, as a student, she continues to pursue strength and perseverance. Her story is for those of single parents everywhere.

Advertisement:

Single Mother, Solider, and Student

CAN YOU MANAGE ALL THIS?

GAIN HOPE WHILE FACING CHALLENGING EVENTS

CLICK HERE

Radio Script :

VO (Intro)[by the anchor for 27 sec]: I'm Sydney Dixon with the newest pop culture scandal. Six time Grammy nominee Chappelle Roan has fallen under more controversy regarding her treatment of fans and the paparazzi. The pop artist known for her album, *The Rise and Fall of a Midwest Princess ,* has taken to social media to call out outrageous fan behavior ever since her rise to fame. She has expressed her distaste with taking photographs with fans and how she feels that fans behavior could be classified as stalking and harassment. More from Audrey Wertz.

VO[by reporter 27-36sec]: Thank you Sydney, Chappells recent actions have left fans torn between supporting her and calling out some of her behaviors. We begin to wonder what this means for her in her very early career. One fan expresses her feelings.

SOT [by the source 36-48sec]These are people that…look up to you and like cherish you, and get so excited to see you, and when they do see you they want to take a picture with you to remember this moment and cherish it.

VO(reporter - 48-58 sec) : The fan expressed her disappointment in fans harassing the artist, but also questions what the artist classifies as harassing. Being a pop artist sometimes comes with taking photos.

SO[source-58-74 sec]: Like taking pictures with fans, like that's part if your job description and if you can't fulfill that, then maybe… maybe this job isn't for you.

VO(Closer)[anchor- 84-83 sec] We have gotten word that Chappell has split with her management team, and wonder what this means for the artist in the future. Sydney Dixon, ZYX News, Fort Collins, Colorado

281- words

Student Work 7:

CSU's Advanced Beam Laboratory to Receive $12.5 Million

Bailey Borkowski, Sept 25, 2024

Fort Collins, CO - Colorado State University's Advanced Beam Laboratory will be receiving $12.5 million, as promised by the U.S. Secretary of State, Jennifer M. Granholm.

During Granholm's visit she toured the laboratory's various programs and facilities and expressed that the money is being gifted in order to expand the lab's work on ALEPH, one of the most powerful lasers. Director Abu Taib Ahmed described the ALEPH as, "an ultrafast, petawatt-class laser system." Ahmed also said, "Petawatt lasers are the most powerful lasers on the planet, generating a million billion watts to produce extreme conditions found in the center of stars."

Ahmed mentioned that the university hopes to use these lasers in order to create a cleaner environment. These lasers could help reduce carbon emissions in the environment.

Regarding creating a cleaner environment Granholm said, "A transition to a clean energy economy is about more than adding clean energy to the electric grid; we also need to revitalize, and fortify, the infrastructure we have now."

The use of the fusion energy from these lasers looks to be a reliable source in order to help create, "clean, safe, and practically inexhaustible energy" said Ahmed

Moving forward in this project CSU hopes to generate promising results from their pilot program in order to help expand their program across the country. To help fund their projects the lab also received two grants from DOE's Office of Fusion Energy Sciences for LaserNetUS.

DOE is a ten-node network that aims to expand the use of ultra-powerful lasers across North America. Through working with CSU, DOE is working to reestablish the United States as one of the leading powerhouses in laser research.

In order to help expand their research the lab is looking to, "upgrade its high power laser research capabilities through the construction of a new facility at the foothills campus in partnership with Marvel Fusion", said Ahmed.

CSU hopes to continue its advancements with the high powered lasers and aid in the expansion of using these lasers across the country.

Student Work 8:

Artificial Intelligence in Medical Diagnostics

Liz R. Emberger

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JTC 300: Strategic Writing and Communication

Suzan Clotfelter

May 2, 2025

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Introduction

As Artificial Intelligence (AI) grows in sophistication, it is transforming healthcare. From streamlining administrative tasks to interpreting complex medical data, AI is becoming increasingly integrated in the clinical setting. Using AI for diagnostic purposes is a controversial, but promising, use of AI in healthcare. The purpose of this report is to investigate current and emerging applications of AI in medical diagnostics, evaluate their effectiveness, and consider to what extent they should be implemented. This topic is becoming increasingly relevant as healthcare systems worldwide seek ways to improve quality, expand access, and reduce cost of care.

As both a biomedical and mechanical engineering student with a strong interest in improving the healthcare system, I am personally invested in the application and responsible use of AI technologies in the medical setting. Upon graduation I strive to contribute to ethically integrating AI into medicine; ensuring that all patients receive the highest quality of care. I also find it important that medical professionals and developers are educated to guard against key patient concerns such as privacy, algorithm bias, and lack of human empathy in clinical care.

On a broader level, the rise of AI in healthcare directly affects everyone seeking medical assistance. Diagnostic errors are one of the leading causes of preventable harm in medicine (Mirbabaie et al., 2021). AI has the potential to significantly reduce such errors by identifying patterns across vast datasets with speed and precision that would be impossible for a human doctor to replicate. But the power of these tools raises concern. There exists growing controversy around privacy, making people question who controls

medical databases and what data might be used for (WillDom, 2024). There also is concern of potential bias and reduced human interaction, leading to empathy gaps between doctor and patient (Al-Antari, 2023; Alowais et al. 2023).

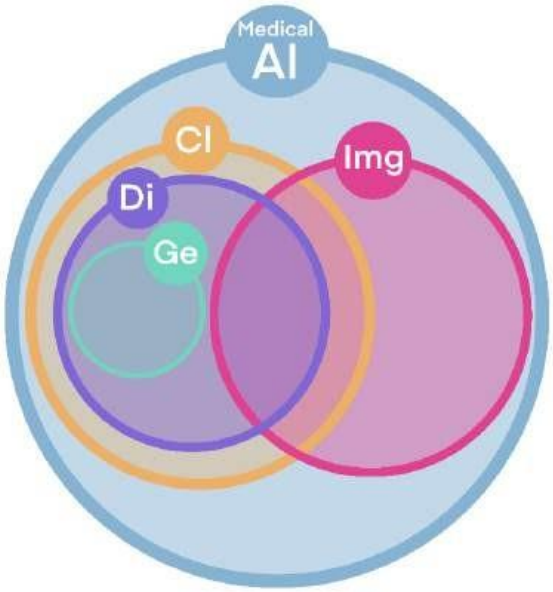
As AI becomes more prevalent, there is a growing body of literature on AI diagnostics; however, much of it remains fragmented. Existing research explores specific algorithms and their uses but lacks a defined set of guidelines on best practices for practical integration into medical environments (Mirbabaie et al., 2021). Furthermore, many studies highlight the promising future of AI in medicine but lack substantial clinical validation, leaving uncertainty about its long-term safety and effectiveness (Alowais et al., 2023; Science News Today, 2025). AI in diagnostics is expanding rapidly making it difficult to comprehensively examine every emerging model and technology. To make this topic more digestible, the diagnostic applications of AI discussed in this report will be limited to and grouped into the following categories:

- Medical Image Analysis – including X-rays, CT scans, and MRIs (Al-Antari, 2023; Mayo Clinic, 2024)
- Disease Classification and Prediction – such as for cardiovascular disease, neurological disorders, and cancer (Mirbabaie et al., 2021; WillDom, 2024)
- Genomic Diagnostics – analyzing genetic data for individualized care (Science News Today, 2025)
- Clinical Decision Support Systems (CDSSs) – compiling EHRs, biosignals, and lab results to assist diagnosis in real time (Al-Antari, 2023; Alowais et al., 2023)

The categories in which AI is used in medicine that are outlined above have also been visually depicted in the figure below to show overlap in the technologies.

Figure 1

Relationships between categories of medical AI



Note. The figure shows the overlap between types of AI models used in medicine. Image analysis is abbreviated to Img, clinical decision support systems is abbreviated to Cl, disease classification and prediction is abbreviated to Di, and genomic diagnostics is abbreviated to Ge. Created by author. See Appendix to see additional information on how figures were created.

This report will consider two critical perspectives. The first perspective considers people who are in full support of expanding AI's role in diagnostics, citing its potential to improve efficiency, accuracy, and accessibility (Alowais et al., 2023; WillDom, 2024). The second perspective considers people that call for caution regarding the medical application of AI, highlighting concerns about data privacy, ethical implications, and the irreplaceable role of human judgment in patient care (Al-Antari, 2023; Mirbabaie et al.,

2021). By evaluating both views and compiling current research, this report will recommend an approach for responsible application of AI in medical diagnostics.

Overview of Perspectives

Perspective 1: AI integration enthusiasts

People encouraging the use of AI in medical diagnostics highlight its unparalleled ability to improve accuracy, speed, and efficiency across a variety of medical specialties. Many studies report that AI systems can outperform human clinicians in areas such as analyzing medical images and genomic diagnostics. For instance, a study on convolutional neural networks (CNNs) demonstrated AI had a superior sensitivity in diagnosing breast and skin cancer compared to human radiologists (Alowais et al., 2023). These models also enable early detection of conditions like diabetic retinopathy and pneumonia. This early detection is potentially saving lives through quicker intervention.

Similarly, AI's role in clinical decision support systems (CDSSs) helps clinicians process data from EHRs, lab tests, and biosignals by cross comparing all data extremely quickly to generate real-time diagnostic suggestions (Al-Antari, 2023). This automation reduces clinician fatigue and cognitive bias, allowing physicians to focus on complex cases. These improvements in diagnostic speed and accuracy also reduced administrative burden, enabling providers to spend more time on patient-centered care (WillDom, 2024).

The potential for personalized and preventative care is a key argument from this perspective. AI models trained on patient-specific data can identify disease risk factors, recommend individualized treatments, and even predict disease progression, all of which are essential steps toward precision medicine (Mayo Clinic, 2024; Tuhin, 2025). Advocates

also highlight AI's ability to scale quickly, a crucial feature in pandemic response and resource-limited healthcare settings (Al-Antari, 2023).

Perspective 2: Critics calling for caution and regulation

Despite the benefits, critics emphasize the significant ethical, technical, and clinical risks of integrating AI into diagnostics. One primary concern is data quality and bias. AI tools rely on large datasets, which often reflect historical biases or lack diversity. These issues can lead to misdiagnosis or unequal care across different populations (Mirbabaie et al., 2021; Kalifa C Albadway, 2024). For example, models trained on predominantly male or white patient data may underperform when diagnosing conditions in women or underrepresented minorities.

Another key issue is data privacy and security. As AI systems handle sensitive medical records, making compliance with laws like HIPAA and GDPR increasingly difficult. Data breaches also pose significant threat if information is uploaded to a single database. Patients may be unaware of how their data is used, and breaches or misuse could erode public trust (WillDom, 2024). Additionally, critics warn that replacing human judgment with algorithmic decisions could diminish empathy and accountability in clinical care (Al-Antari, 2023).

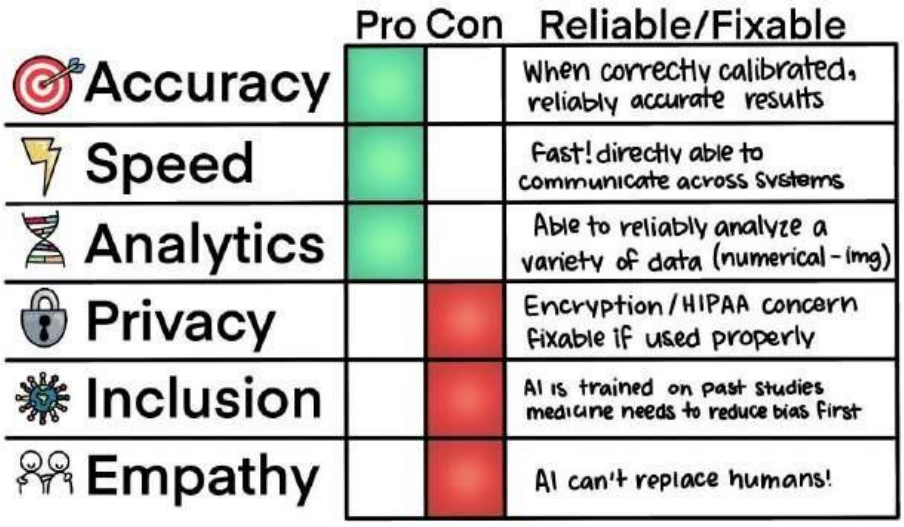
The lack of clinical validation and integration infrastructure also raises concerns. Many AI systems are developed in research settings but lack real-world testing, especially in diverse hospital environments (Mirbabaie et al., 2021). Integrating these tools into existing workflows requires substantial training, technical infrastructure, and user interface design. These are challenges many institutions are not yet equipped to handle.

Conclusion: Personal Position

After evaluating both perspectives, I think that there is a balance between the two extremes of AI enthusiasm and shutting it out completely. I believe that AI should be carefully integrated into medical diagnostics through a collaborative, regulated, and transparent approaches. The evidence overwhelmingly shows that AI can improve diagnostic accuracy, reduce medical errors, and support personalized care, when properly applied (Alowais et al., 2023; Tuhin, 2025; WillDom, 2024). However, unregulated or premature deployment risks compromising patient safety and equity. Pictured below is a figure that summarizes the main pros and cons of AI in medicine.

Figure 1

Summary of benefits and drawbacks of medical AI



Note. The figure lists each category as a pro or con then supplies an additional note on the subject in the far right column. Created by author. See Appendix to see additional information on how figures were created.

As can be seen in the figure, the pros and cons are both valid and neither side can be ignored. Proper use of AI in medicine will emphasize the benefits and work to eliminate

negative aspects. To ensure ethical and effective use, it is essential that AI systems undergo extensive clinical validation using diverse datasets. Developers must prioritize transparency through explainable AI, and clinicians must remain actively involved in the diagnostic process to retain empathy and context-driven decision-making (Mirbabaie et al., 2021; Al-Antari, 2023). Training programs that familiarize healthcare professionals with AI tools are also critical to bridging the gap between developers and end users (Alowais et al., 2023). Additionally, offering free, voluntary programs that familiarize patients with AI tools is critical to build trust between doctor and patient, enabling people to feel more comfortable with AI technologies.

The implications for the field are significant. AI could redefine how diagnoses are made and how care is delivered, potentially reducing disparities, increasing access in underserved areas, and optimizing workflows. However, these benefits can only be realized if implementation prioritizes human oversight, data ethics, and inclusivity in design.

Recommendation

Based on my findings, I recommend the following steps to responsibly integrate AI into medical diagnostics:

1. **Mandate Transparency and Bias Audits**

   Developers should be required to make AI algorithms interpretable using techniques like Explainable AI (XAI). Regular audits for bias and fairness should be a legal and ethical requirement (Mirbabaie et al., 2021). Developers also should have to publish data regarding any discrepancies or ethnic groups that are underrepresented in their testing.

2. **Expand Clinical Testing Before Widespread Use**

   AI models must be validated across diverse clinical settings and patient demographics before deployment. Current research should shift toward real-world testing and usability evaluations (Kalifa C Albadway, 2024). Notably, AI decisions need to be tested independently of doctors before they can become tools for them.

3. **Encourage Human-AI Collaboration**

   AI should serve as a support tool, not a replacement. Maintaining human oversight ensures that clinicians remain accountable and that patients continue to receive personalized, empathetic care (Al-Antari, 2023). Learning how to use AI effectively should become a part of medical training, including in medical school and mandatory refresher courses for practitioners.

4. **Strengthen Regulation and Infrastructure**

   Policymakers must create a clear regulatory framework. Simultaneously, hospitals must invest in secure data infrastructure and provide AI training for clinical staff (Alowais et al., 2023).

5. **Promote Inclusive and Ethical AI Development**

   AI systems should be designed collaboratively by diverse, multidisciplinary teams to ensure that tools serve all patient populations equitably. This includes investing in datasets that represent age, gender, ethnicity, and rare disease variations (WillDom, 2024; Tuhin, 2025).

By following these steps, healthcare systems can harness the potential of AI while safeguarding the core values of medicine: trust, equity, and human connection.

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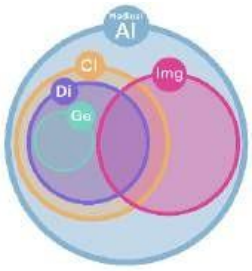
Appendix: Figure Creation

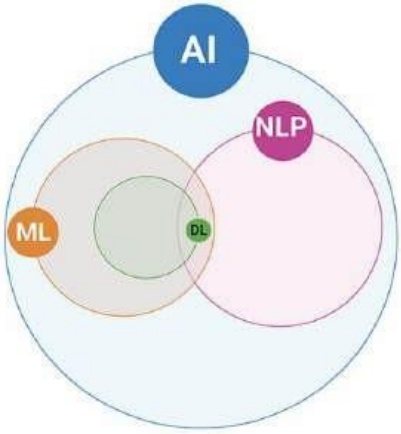
Creation of Figure 1 – *Relationships between categories of medical AI*



Inspired by:

Figure 3

Relationships between branches of AI models



Note. The figure shows the overlap between current branches of AI models. Artificial intelligence is abbreviated to AI, machine learning is abbreviated to ML, deep learning is abbreviated to DL, and natural language model is abbreviated to NLP. From "Revolutionizing healthcare: The role of artificial intelligence in clinical practice," by S. A. Alowais, S. S. Alghamd, N. Alsuhebany, T. Alqahtani, A. I. Alshaya, S. N. Almohareb, A. Aldairem, M. Alrashed, K. Bin Saleh, H. A. Badreldin, M. S. Al Yami, S. Al Harbi, C A. M. Albekairy, 2023, *BMC Medical Education, 23*(1), Article 689 (https://doi.org/10.1186/s12909-023-04698-z). Copyright 2023 by the authors.

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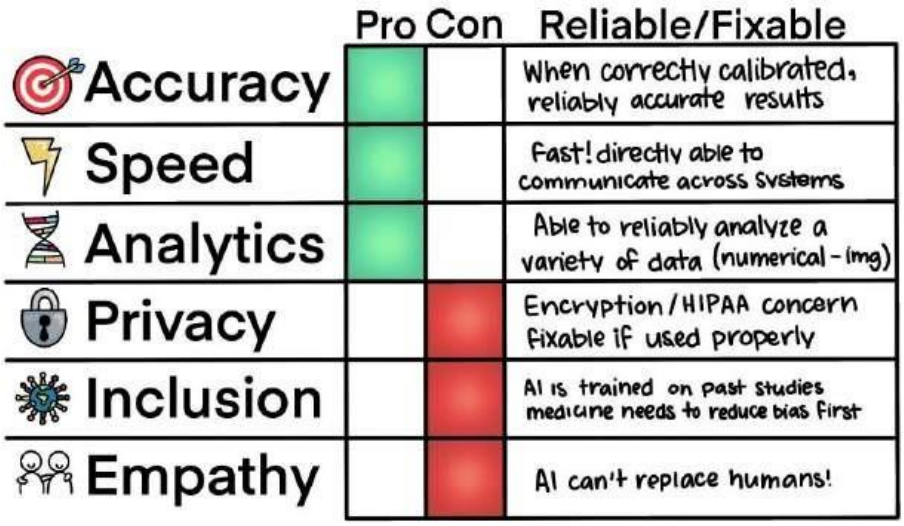
Creation of Figure 2 – *Summary of benefits and drawbacks of medical AI*



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Student Work 9:

Artificial Intelligence in Medical Diagnostics

Liz R. Emberger

Walter Scott College of Engineering, Colorado State University

JTC 300: Strategic Writing and Communication

Suzan Clotfelter

May 2, 2025

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Introduction

As Artificial Intelligence (AI) grows in sophistication, it is transforming healthcare. From streamlining administrative tasks to interpreting complex medical data, AI is becoming increasingly integrated in the clinical setting. Using AI for diagnostic purposes is a controversial, but promising, use of AI in healthcare. The purpose of this report is to investigate current and emerging applications of AI in medical diagnostics, evaluate their effectiveness, and consider to what extent they should be implemented. This topic is becoming increasingly relevant as healthcare systems worldwide seek ways to improve quality, expand access, and reduce cost of care.

As both a biomedical and mechanical engineering student with a strong interest in improving the healthcare system, I am personally invested in the application and responsible use of AI technologies in the medical setting. Upon graduation I strive to contribute to ethically integrating AI into medicine; ensuring that all patients receive the highest quality of care. I also find it important that medical professionals and developers are educated to guard against key patient concerns such as privacy, algorithm bias, and lack of human empathy in clinical care.

On a broader level, the rise of AI in healthcare directly affects everyone seeking medical assistance. Diagnostic errors are one of the leading causes of preventable harm in medicine (Mirbabaie et al., 2021). AI has the potential to significantly reduce such errors by identifying patterns across vast datasets with speed and precision that would be impossible for a human doctor to replicate. But the power of these tools raises concern. There exists growing controversy around privacy, making people question who controls

medical databases and what data might be used for (WillDom, 2024). There also is concern of potential bias and reduced human interaction, leading to empathy gaps between doctor and patient (Al-Antari, 2023; Alowais et al. 2023).

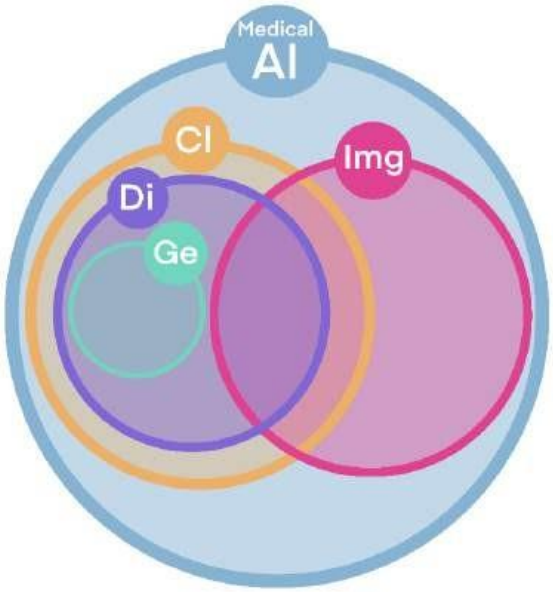
As AI becomes more prevalent, there is a growing body of literature on AI diagnostics; however, much of it remains fragmented. Existing research explores specific algorithms and their uses but lacks a defined set of guidelines on best practices for practical integration into medical environments (Mirbabaie et al., 2021). Furthermore, many studies highlight the promising future of AI in medicine but lack substantial clinical validation, leaving uncertainty about its long-term safety and effectiveness (Alowais et al., 2023; Science News Today, 2025). AI in diagnostics is expanding rapidly making it difficult to comprehensively examine every emerging model and technology. To make this topic more digestible, the diagnostic applications of AI discussed in this report will be limited to and grouped into the following categories:

- Medical Image Analysis – including X-rays, CT scans, and MRIs (Al-Antari, 2023; Mayo Clinic, 2024)
- Disease Classification and Prediction – such as for cardiovascular disease, neurological disorders, and cancer (Mirbabaie et al., 2021; WillDom, 2024)
- Genomic Diagnostics – analyzing genetic data for individualized care (Science News Today, 2025)
- Clinical Decision Support Systems (CDSSs) – compiling EHRs, biosignals, and lab results to assist diagnosis in real time (Al-Antari, 2023; Alowais et al., 2023)

The categories in which AI is used in medicine that are outlined above have also been visually depicted in the figure below to show overlap in the technologies.

Figure 1

Relationships between categories of medical AI



Note. The figure shows the overlap between types of AI models used in medicine. Image analysis is abbreviated to Img, clinical decision support systems is abbreviated to Cl, disease classification and prediction is abbreviated to Di, and genomic diagnostics is abbreviated to Ge. Created by author. See Appendix to see additional information on how figures were created.

This report will consider two critical perspectives. The first perspective considers people who are in full support of expanding AI's role in diagnostics, citing its potential to improve efficiency, accuracy, and accessibility (Alowais et al., 2023; WillDom, 2024). The second perspective considers people that call for caution regarding the medical application of AI, highlighting concerns about data privacy, ethical implications, and the irreplaceable role of human judgment in patient care (Al-Antari, 2023; Mirbabaie et al.,

2021). By evaluating both views and compiling current research, this report will recommend an approach for responsible application of AI in medical diagnostics.

Overview of Perspectives

Perspective 1: AI integration enthusiasts

People encouraging the use of AI in medical diagnostics highlight its unparalleled ability to improve accuracy, speed, and efficiency across a variety of medical specialties. Many studies report that AI systems can outperform human clinicians in areas such as analyzing medical images and genomic diagnostics. For instance, a study on convolutional neural networks (CNNs) demonstrated AI had a superior sensitivity in diagnosing breast and skin cancer compared to human radiologists (Alowais et al., 2023). These models also enable early detection of conditions like diabetic retinopathy and pneumonia. This early detection is potentially saving lives through quicker intervention.

Similarly, AI's role in clinical decision support systems (CDSSs) helps clinicians process data from EHRs, lab tests, and biosignals by cross comparing all data extremely quickly to generate real-time diagnostic suggestions (Al-Antari, 2023). This automation reduces clinician fatigue and cognitive bias, allowing physicians to focus on complex cases. These improvements in diagnostic speed and accuracy also reduced administrative burden, enabling providers to spend more time on patient-centered care (WillDom, 2024).

The potential for personalized and preventative care is a key argument from this perspective. AI models trained on patient-specific data can identify disease risk factors, recommend individualized treatments, and even predict disease progression, all of which are essential steps toward precision medicine (Mayo Clinic, 2024; Tuhin, 2025). Advocates

also highlight AI's ability to scale quickly, a crucial feature in pandemic response and resource-limited healthcare settings (Al-Antari, 2023).

Perspective 2: Critics calling for caution and regulation

Despite the benefits, critics emphasize the significant ethical, technical, and clinical risks of integrating AI into diagnostics. One primary concern is data quality and bias. AI tools rely on large datasets, which often reflect historical biases or lack diversity. These issues can lead to misdiagnosis or unequal care across different populations (Mirbabaie et al., 2021; Kalifa C Albadway, 2024). For example, models trained on predominantly male or white patient data may underperform when diagnosing conditions in women or underrepresented minorities.

Another key issue is data privacy and security. As AI systems handle sensitive medical records, making compliance with laws like HIPAA and GDPR increasingly difficult. Data breaches also pose significant threat if information is uploaded to a single database. Patients may be unaware of how their data is used, and breaches or misuse could erode public trust (WillDom, 2024). Additionally, critics warn that replacing human judgment with algorithmic decisions could diminish empathy and accountability in clinical care (Al-Antari, 2023).

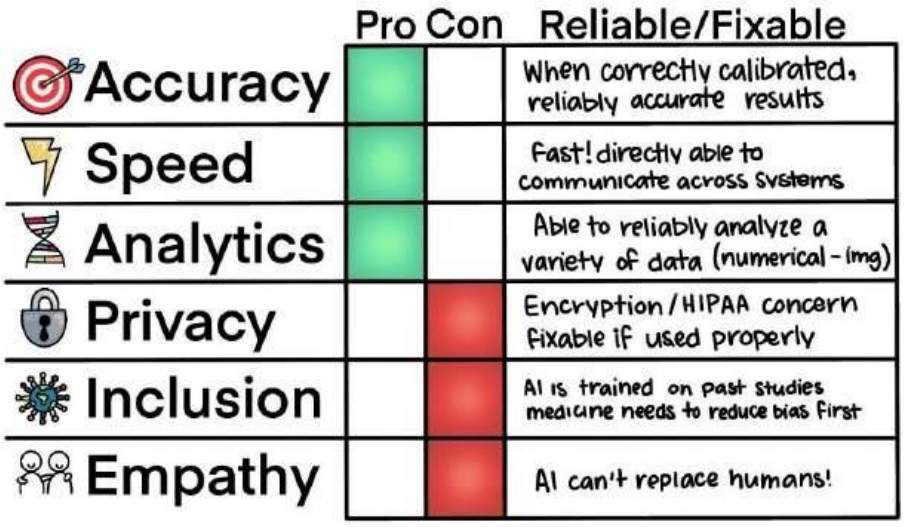
The lack of clinical validation and integration infrastructure also raises concerns. Many AI systems are developed in research settings but lack real-world testing, especially in diverse hospital environments (Mirbabaie et al., 2021). Integrating these tools into existing workflows requires substantial training, technical infrastructure, and user interface design. These are challenges many institutions are not yet equipped to handle.

Conclusion: Personal Position

After evaluating both perspectives, I think that there is a balance between the two extremes of AI enthusiasm and shutting it out completely. I believe that AI should be carefully integrated into medical diagnostics through a collaborative, regulated, and transparent approaches. The evidence overwhelmingly shows that AI can improve diagnostic accuracy, reduce medical errors, and support personalized care, when properly applied (Alowais et al., 2023; Tuhin, 2025; WillDom, 2024). However, unregulated or premature deployment risks compromising patient safety and equity. Pictured below is a figure that summarizes the main pros and cons of AI in medicine.

Figure 1

Summary of benefits and drawbacks of medical AI



Note. The figure lists each category as a pro or con then supplies an additional note on the subject in the far right column. Created by author. See Appendix to see additional information on how figures were created.

As can be seen in the figure, the pros and cons are both valid and neither side can be ignored. Proper use of AI in medicine will emphasize the benefits and work to eliminate

negative aspects. To ensure ethical and effective use, it is essential that AI systems undergo extensive clinical validation using diverse datasets. Developers must prioritize transparency through explainable AI, and clinicians must remain actively involved in the diagnostic process to retain empathy and context-driven decision-making (Mirbabaie et al., 2021; Al-Antari, 2023). Training programs that familiarize healthcare professionals with AI tools are also critical to bridging the gap between developers and end users (Alowais et al., 2023). Additionally, offering free, voluntary programs that familiarize patients with AI tools is critical to build trust between doctor and patient, enabling people to feel more comfortable with AI technologies.

The implications for the field are significant. AI could redefine how diagnoses are made and how care is delivered, potentially reducing disparities, increasing access in underserved areas, and optimizing workflows. However, these benefits can only be realized if implementation prioritizes human oversight, data ethics, and inclusivity in design.

Recommendation

Based on my findings, I recommend the following steps to responsibly integrate AI into medical diagnostics:

1. **Mandate Transparency and Bias Audits**

   Developers should be required to make AI algorithms interpretable using techniques like Explainable AI (XAI). Regular audits for bias and fairness should be a legal and ethical requirement (Mirbabaie et al., 2021). Developers also should have to publish data regarding any discrepancies or ethnic groups that are underrepresented in their testing.

2. **Expand Clinical Testing Before Widespread Use**

   AI models must be validated across diverse clinical settings and patient demographics before deployment. Current research should shift toward real-world testing and usability evaluations (Kalifa C Albadway, 2024). Notably, AI decisions need to be tested independently of doctors before they can become tools for them.

3. **Encourage Human-AI Collaboration**

   AI should serve as a support tool, not a replacement. Maintaining human oversight ensures that clinicians remain accountable and that patients continue to receive personalized, empathetic care (Al-Antari, 2023). Learning how to use AI effectively should become a part of medical training, including in medical school and mandatory refresher courses for practitioners.

4. **Strengthen Regulation and Infrastructure**

   Policymakers must create a clear regulatory framework. Simultaneously, hospitals must invest in secure data infrastructure and provide AI training for clinical staff (Alowais et al., 2023).

5. **Promote Inclusive and Ethical AI Development**

   AI systems should be designed collaboratively by diverse, multidisciplinary teams to ensure that tools serve all patient populations equitably. This includes investing in datasets that represent age, gender, ethnicity, and rare disease variations (WillDom, 2024; Tuhin, 2025).

By following these steps, healthcare systems can harness the potential of AI while safeguarding the core values of medicine: trust, equity, and human connection.

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Appendix: Figure Creation

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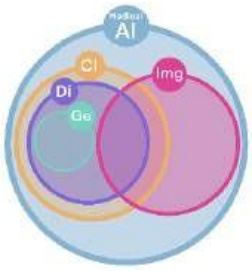
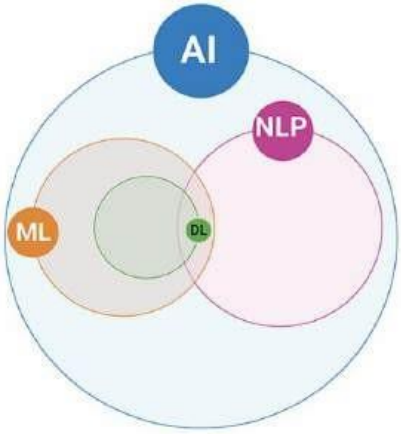


Inspired by:

Figure 3

Relationships between branches of AI models



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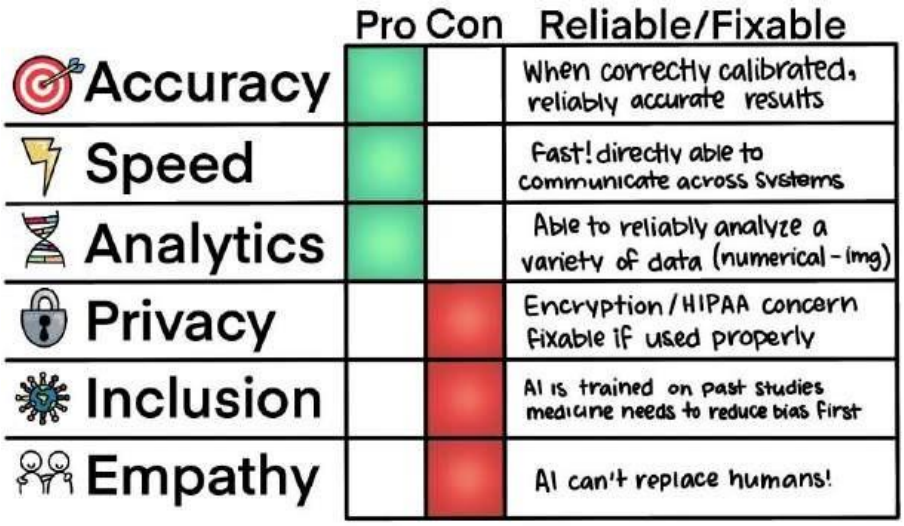

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