KIRANA IRFANO

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EDUCATION

COLORADO SCHOOL OF MINES, GOLDEN COLORADO GPA 3.9

Master of Science in Computer Science EXPECTED MAY 2025

- Memberships: Society of Women Engineers (SWE), Society of Asian Scientists and Engineers (SASE), Indonesian Student Association (ISA)

Bachelor of Science in Computer Science – Data Science Specialty AUG 2024

- Honors and Awards: Summa Cum Laude, Presidential Merit Scholarship Recipient, Dean's List, "Leadership by Design" Grandey Honors Program

TECHNICAL SKILLS

Python, SQL, C++, Machine Learning and AI, Numpy, Pandas, Pytorch, Flask, Git, Scala, Linux, R, Excel, Java, Statistical Modeling and Analysis, Software Engineering, Database and Network Management, JavaScript, OCaml, Docker, HTML, CSS, Agile Software Development

EXPERIENCE

RESEARCH ASSISTANT - Aria Labs, Colorado School of Mines AUG 2024 – PRESENT

- Collaborate with hardware and autonomy team to integrate Robot Operating Systems (ROS) and autonomy algorithms to facilitate a robot tour guide for a campus environment.
- Leverage large language models to translate verbal commands into precise robotic actions using OpenAI's Assistant API.
- Enhance natural language processing capabilities to improve robot-human interaction through speech to text recognition and wake word detection.

AI AND MACHINE LEARNING INTERN - Ricoh, Golden/Boulder MAY 2024 – JUN 2024

- Facilitated a team as Scrum Master to develop a multimodal chatbot in Python using generative AI and semantic search for printer technicians to enable quicker solutions to printer errors.
- Utilized retrieval augmented generation (RAG) to process diverse documentation (PDFs, websites, images, videos, etc.), extract, chunk, and convert text into vector embeddings for a searchable database used as context for a large language model (LLM).
- Integrated OpenAI's GPT-3.5 to generate comprehensive and concise responses from semantic search results to minimize error.

RESERVOIR DATA ANALYST - Chevron/PDC Energy, Denver MAY 2023 – AUG 2023

- Programmed regression-optimization model for supervised learning in Python to optimize EUR oil numbers.
- Applied linear regression and random forests models to predict EUR oil forecasts.
- Increased predicted oil production by ~5% using optimized solution while reducing 30+ hours of work to under 1 hour.
- Partnered with reservoir engineers to analyze a dataset of 120+ features on well spacing and oil production.

ADMINISTRATIVE ASSISTANT - Residence Life, Colorado School of Mines AUG 2022 – JUN 2023

- Delivered high quality customer service to 350+ first-year students, handling inquiries/issues and managing check-ins.
- Managed daily desk operations (building access, mail service, office organization, and supply inventory).
- Utilized software platforms (i.e. StarRez), to assist in departmental processes and administrative tasks.
- Created and maintained interpersonal relationships with university staff, residents, and other stakeholders.

PROJECTS

TEAM LEAD, LARGE LANGUAGE MODEL PROJECT

- Led a team in employing Large Language Modeling using OpenAI GPT 3.5 model and python libraries.
- Developed a program that can read an input PDF file and create flashcards that promotes interactive learning.

HEART ATTACK POSSIBILITY PROJECT

- Managed a data analysis project on heart attack possibility database to analyze causes linked to heart.
- Trained a K Nearest Neighbor Classification Model to make conclusions.

BREAST CANCER CLASSIFICATION PROJECT

- Trained SVM models to classify breast cancer data as "benign" or "malignant" based on preprocessed and feature-selected data.

SCRUM MASTER, DESIGN CLASS FINAL PROJECT - "SILENT SEAS"

- Led a team to design a noise footprint tracking app for an individual's contribution to ocean noise pollution.
- Tied for first place in the competition.