AKANKSHA RAI

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EDUCATION

UNIVERSITY OF MINNESOTA TWIN-CITIES — Minnneapolis, MN
Bachelor of Science — Expected May 2025
Major in Computer Science; Minor in Economics
Cumulative GPA: 3.95/4.0 ; Dean's List: 2022-2024
Relevant Coursework: Data Structures and Algorithms, Machine Architecture; Machine Learning

TECHNICAL SKILLS

Languages: Python (proficient), Java (proficient), HTML, CSS, Javascript, R, C, Assembly
Tools/Platforms: Git, Github, Figma, VSCode, Postman, Airflow, Jira, Excel, AndroidStudio
Frameworks: Flask, NumPy, Pandas, RestAPIs

EXPERIENCE

Artificial Intelligence Engineer — June 2023 – Aug 2023
RadicalX

- Devised anti-cheating and fraud detection techniques through the implementations of algorithms like **Karp-Rabin** and **MinHash** resulting in a 25% reduction in plagiarism
- Created a comprehensive knowledge base in **JSON** format to facilitate the training of language models; leveraged **LangChain** to enable language models to learn and comprehend linguistic patterns
- Utilized **word2vec** to tokenize and extract meaningful insights from large datasets, enhancing data-driven feature engineering efforts.

Information Security Department Programmer — Mar 2023 – Present
University of Minnesota Office of Information Technology

- Developed and optimised **Python** applications deployed on monitoring specific IP servers, resulting in significant enhanced performance and functionality
- Successfully integrated **REST APIs** into code libraries, optimizing data exchange processes and boosting application efficiency by 40%, resulting in faster response times and improved user experience.
- Achieved rigorous testing goals by developing comprehensive test suites using **TOX** files, which defined and executed diverse scenarios and edge cases.

Research Assistant at DMLSys Lab (Distributed Machine Learning and Integrated Systems) — Mar 2023 - Present

- Conducted comprehensive literature reviews to contribute to the design of algorithms for secure and efficient data sharing in federated learning environments
- Played a key role in fine-tuning datasets, ensuring their quality and suitability for algorithm design and implementation in secure and efficient data sharing

LEADERSHIP/EXTRACURRICULAR

Society of Women Engineers- Technical Team Member — Oct 2023 - Present

- Working with a cross-functional team across academia and industry to develop a health monitoring system for John Deere balers
- Collaborating with John Deere's engineering and product teams to understand pain points and requirements
- Gaining first-hand experience in systems engineering lifecycle tailored to meet needs of industry clients

Co-Director of Academic Affairs Committee — Jan 2023 – May 2023
Science and Engineering Student Board

- Led a team of dedicated individuals, effectively delegating tasks, and fostering a collaborative environment to advocate for necessary resources and support systems
- Demonstrated effective problem-solving skills and a proactive approach in addressing academic challenges, working closely with stakeholders to find viable solutions.