AKANKSHA RAI

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EDUCATION

UNIVERSITY OF MICHIGAN ANN-ARBOR Ann Arbor, MI
Bachelor of Science in Computer Science Expected May 2026
Transfer Student

UNIVERSITY OF MINNESOTA TWIN CITIES Minneapolis, MN
Cumulative GPA: 3.96/4.0 ; Dean's List: 2022-2024 Fall 2022 - Spring 2024
Relevant Coursework: Data Structures and Algorithms, Machine Architecture; Machine Learning; Program Design and Development, Regression and Statistical Analysis

TECHNICAL SKILLS

Languages: Python, Java, HTML, CSS, Javascript, R, C, Assembly, C++, OCaml
Tools/Platforms: Git, Github, Figma, VSCode, Postman, Jira, Excel, AndroidStudio, Zap, MySQL, Docker, SVN
Frameworks: Flask, NumPy, Pandas, RestAPIs, React, Robot Framework, Jenkins
OS: Windows, Linux, macOS

EXPERIENCE

Cybersecurity Software Engineering Intern Minneapolis, MN
Trane Technologies May 2024 – Aug 2024
- Automated active scans through OWASP's ZAP Tool using Python's Robot Framework to automatically spider through websites to identify potential security vulnerabilities resulting in reduced test result time by 66%
- Enhanced website's reliability by implementing a CI/CD pipeline with Jenkins to continuously monitor and alert architects on possible security issues using JIRA's REST API to automatically create tickets

Information Security Developer Minneapolis, MN
University of Minnesota Office of Information Technology Mar 2023 – May 2024
- Developed and optimized 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.

Research Assistant at Distributed Machine Learning and Integrated Systems Lab Minneapolis, MN
University of Minnesota Computer Science Department Feb 2023 – May 2024
- Conducted comprehensive literature reviews to contribute to the design of algorithms for secure and efficient data sharing in federated learning environments
- Fine-tuned datasets, ensuring their quality and suitability for algorithm design and implementation in secure and efficient data sharing

PROJECTS

Drone Delivery Simulation Jan 2024 - April 2024
- Developed key features for a drone simulation using Observer and Factory design patterns, such as battery charging systems that dynamically create and manage charging stations and implementing thief protection of packages utilizing data analysis.
- Engaged in a waterfall/test-driven development lifecycle, executing software development activities including writing requirements, designing UMLs, coding, testing, and documenting code following Google documentation conventions.

GreenChoice - Google Solutions Challenge Nov 2023 - Feb 2024
- Developed a mobile application using AndroidStudio with a group of 4 team members to promote the switch to sustainable, greener alternatives in individuals' daily lives. Created a logging system to track "green choices" made daily, and also provided educational content and an interactive user interface.
- Created responsive screens and managed database for user login functionality using Firebase and Java

Validify - 1st Place in University of Minnesota Makeathon March 2024
- Leveraged AWS's Bedrock tool to ideate and develop an extension to combat misinformation on social media, utilizing credible medical sources to train a model that generates trust percentages for posts, enhancing transparency and accuracy in information dissemination

Society of Women Engineers Team Tech - John Deere March 2024
- Worked with a cross-functional team across academia and industry to develop a health monitoring system for John Deere balers
- Collaborated with John Deere's engineering and product teams to understand pain points and requirements, gained first-hand experience in systems engineering lifecycle tailored to meet needs of industry clients