

Sahana Rajashekara

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EDUCATION

Northeastern University (GPA: 4/4)

Jan 2024 – Dec 2025

Master of Science in Computer Science

Courses: *Programming Design Paradigm, Introduction to Data Management and Processing, Algorithms, Machine Learning, Web Development*

PES Institute of Technology

Aug 2017 - Aug 2021

Bachelor of Engineering in Electronics and Communication

Courses: *Object Oriented Programming, Data Structures, Machine Learning, Digital Image Processing*

WORK EXPERIENCE

Mphasis Limited

Sep 2021 – Dec 2023

Software Engineer

- Engineered full-stack e-commerce web applications using Java, Svelte, JSP, Spring Boot, SOAP, and REST.
- Developed UIaaS (User Interface as a Service) web components and supported backend REST APIs for full-tech product search with advanced functionalities including filtering, add-to-cart, pagination, and bulk document downloads for 500+ products.
- Improved application performance by optimizing backend processing through the implementation of multithreading and caching, resulting in a 66% reduction in processing time.
- Led technology migration from Angular to Svelte, building the application from the ground up, addressing architectural differences and ensuring seamless functionality, resulting in a 45% reduction in the build size of web components.
- Implemented ESAPI (Enterprise Security API) library to mitigate XSS (Cross-Site Scripting), reducing identified vulnerabilities in web applications by 75% and enhancing cybersecurity resilience.

PROJECTS

Credit Card Lead Prediction | Northeastern University

- Predicted potential credit card applicants to optimize marketing strategies and enhance customer acquisition.
- Conducted data pre-processing, modeling, validation and exploratory data analysis, and handled class imbalance using SMOTE. Implemented and fine-tuned Decision Tree, Random Forest, and XGBoost models, achieving an accuracy of 0.904 and a precision of 0.935 with the XGBoost model.

Sentiment Analysis Application | Mphasis Limited

- Developed a customer reviews sentiment analysis application using Python, Svelte, and NLTK.
- Integrated and fine-tuned the transformer-based Hugging Face BERT model, achieving an average sentiment prediction accuracy of 98% across diverse review datasets. Implemented features for generating detailed sentiment analysis reports, enhancing decision-making processes.

AI Chatbot SaaS Platform

- Built a secure and scalable AI chatbot SaaS application using the MERN stack (MongoDB, Express, React, Node.js) and TypeScript.
- Integrated OpenAI's API for real-time chatbot interactions, storing user sessions and chats in MongoDB.
- Designed a responsive UI with Vite and implemented JWT-based user authentication and authorization, ensuring secure API access with HTTP-only cookies.

SKILLS

Programming Languages: Python, Java, JavaScript, C, C++, R, HTML, CSS

Frameworks: ReactJS, SvelteJS, NodeJS, NextJS, AngularJS, Spring Boot, JUnit

Libraries: NumPy, Pandas, Seaborn, Transformers, TensorFlow, PyTorch, Sklearn, OpenCV

Tools: Git, GitHub, SoapUI, Eclipse, Visual Studio Code, IntelliJ, Postman

Cloud & Operating Systems: AWS Lambda, Amazon DynamoDB, AWS SAM, Unix, Linux

INTERESTS

Skiing • Trekking • Canyoneering • Hiking • Rewriting The Code Member • Graduate Leadership Institute Cohort