




SMAYAN RANJAN

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Education

University of Michigan

Ann Arbor, MI

Bachelors of Science and Engineering in Data Science - GPA: 3.8/4.0

Expected May 2026

- Coursework: Data Structures and Algorithms, Web Systems, Machine Learning, Computer Organization, Applied Regression Analysis, Computational Linguistics, Discrete Mathematics, Computer Science Pragmatics, Linear Algebra

Experience

Front-end Developer

January 2025 – Present

Void Tech/PantheraAI

Ann Arbor, MI

- Contracted by PantheraAI to build a secure web application with a user interface for OTC clients to request cryptocurrency trading services using **React** and **Tailwind CSS**.
- Designed components for login with two-factor authentication, trade requests, viewing past transactions, and managing cryptocurrency and fiat balances.
- Developed an admin portal to manage customer data, view transaction histories, and monitor asset holdings.
- Collaborated with backend developers to ensure seamless integration of frontend features with the financial processes and database using **Flask**.

Software Engineering Intern

May 2024 – August 2024

Functional Food Center

Dallas, Texas

- Used **Front-end Frameworks** such as **HTML/CSS** and **Javascript** to develop the website for FFC's International Satellite Conference, set to host over **5,000 attendees** from **125+ countries**.
- Updated and maintained website content related to upcoming conferences using data managed on **Google Sheets**, including speaker profiles, abstract submission details, and conference program schedules.
- Enhanced the secondary website for FFC's journal publication services by constructing **React** components for publications, streamlining the management of scientific research articles in the field of Functional Foods.

Software Developer

January 2024 – May 2024

Wolverine Sports Analytics

Ann Arbor, Michigan

- Implemented a **Ridge Regression Model** to predict future NBA MVP winners by ranking **40+ basketball metrics**.
- Used Mean Squared Error, Average Precision, and a Backtesting function to calculate model accuracy, resulting in over **70 Percent accuracy** for placing players into the top **5 vote-recievers** through the past **25+ years**.
- Web Scraped data from the past **30+ years** using **Selenium chromedriver** for Dynamic Data Extraction for around **16,000** players using over **40** data categories resulting in over **600,000** data points.

Projects

Money Monitor | *Javascript/TypeScript, MongoDB, ExpressJS, ReactJS, NodeJS, TailwindCSS*

- Designed a full-stack financial tracker application using the **MERN** stack that allows users to record their transactions with seamless client-server communication facilitated by axios for asynchronous requests.
- Developed core **RESTful APIs** using **Express.js** and **Node.js**, enabling seamless interactions with a **NoSQL** database managed using **Mongoose**.
- Implemented secure user authentication using **Clerk**, enabling users to only access and modify their own financial data.
- Designed a responsive UI using **React**, styled with **Tailwind CSS**, and ensured secure and efficient data exchange in **JSON** format, with **CORS** policy compliance to handle cross-origin requests between the frontend and backend.

Instagram Clone | *Python, Flask, ReactJS, SQLite, Jinja Templating, AWS*

- Developed an Instagram clone web application using **Flask**, **SQLite**, and **REST API's** featuring client-side dynamic pages with complex user interactions such as double-click liking, infinite scroll, and other standard Instagram features.
- Designed a robust **SQLite** database schema with complex relational management, implementing user profiles, posts, and social interactions with referential integrity and cascading delete operations.
- Implemented secure authentication using **SHA-512** password hashing, session management, and fine-grained access control, ensuring users can only interact with permitted content.
- Deployed the full-stack web application on **AWS EC2** using **Nginx** and **Flask**, demonstrating end-to-end web application development from database design to cloud hosting

Technical Skills

Languages: C++, C, Python, JavaScript, TypeScript, R, HTML(Jinja), CSS, SQL

Technologies: Git/Github/Gitlab, MongoDB(NoSQL Databases), ExpressJS, ReactJS, NodeJS, MongooseJS, Flask, SQLite, MySQL, PowerBI, AWS, Jupyter, Clerk Authentication, Bootstrap/Tailwind, Pandas, Scikit Learn, Selenium