

Aarjav Mitkari

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EDUCATION

Carleton University

Ottawa, ON

B. Eng in Software Engineering (Co-op option)

Sept. 2022 – Present

- Second year standing, 11.17/12 (A)
 - * Influential Courses: Introduction to Imperative Programming, Data Management, Discrete Structures 1, Discrete Structures 2, Object-Oriented Software Development, Algorithms and Data Structure
- 2023-24 and 2022-23 Dean's Honour List, Award of Excellence for International Students, Entrance Scholarship

EXPERIENCE

AI/ML Research Assistant

May 2024 – Present

Carleton University

Ottawa, ON

- Collaborating with a professor on advanced AI/ML research, specializing in object tracking and computer vision.
- Developing algorithms with CNNs, transfer learning, data augmentation, and GANs for enhanced object detection and tracking.
- Conducting data analysis to improve system accuracy and capabilities.

APPLIED PROJECTS

Digital Wallet Web Application | *Node.js, React.js*

June 2024 – July 2024

- * Developed a full-stack digital wallet web application featuring user authentication with Zod and JSON Web Token (JWT) and real-time transaction processing.
- * Implemented a user dashboard enabling search and transaction functionalities, allowing users to transfer money between accounts with real-time balance updates.
- * Implemented robust backend logic to ensure secure and accurate financial transactions between user accounts.

Stock Prediction Using Machine Learning | *Python, Pandas, Numpy, scikit-learn, XGBoost*

July 2024

- * Built a predictive model using historical S&P 500 data from Yahoo Finance, leveraging both Random Forest and XGBoost classifiers to forecast stock movements.
- * Engineered advanced features such as rolling averages and trend indicators to enhance model accuracy and performance.
- * Executed comprehensive backtesting, evaluating model precision and adjusting hyperparameters to optimize prediction results over various time horizons.

Food Menu Web-App | *Python, Django*

October 2023 – January 2024

- * Developed a seamless food menu web app using Python and Django, which enabled efficient handling of various functionalities in a structured manner by implementing class-based views and defining URL patterns.
- * Implemented CRUD operations for menu items integrated with user authentication, which ensured secure user access and efficient data management through profile creation by Django signals and streamlined data input processes.
- * Designed and managed the database schema using Django models, which ensured data integrity and relationship mapping for robust information storage through the use of migrations.
- * Crafted user-friendly, consistent and engaging templates with dynamic content, which optimized site design and interactivity by integrating static files.

SKILLS

Technical Skills

- * Programmed websites using **Python, Javascript, Django, Node.js** and **React.js** allowing users a seamless web experience.
- * Working knowledge of **C, C++** and **Java** (IntelliJ) to create different data structures utilities and OOPs concepts.
- * Showcased analytical skills to identify data patterns, address edge cases and create clear graphs using **Python** and **SQL**.
- * Working knowledge of version control systems like **Git** and **GitHub**, as well as containerization using **Docker** for deploying and managing applications.

Communication Skills

- * Expressed **clear communication** as the lead for the creation of the Data Analyser App, **effectively conveying project goals, expectations** and **frequent updates** to the team which fostered understanding through regular team meetings while practicing **open feedback** and making sure that all members were on the same page regarding project objectives.
- * Practiced the skill of **managing project timelines, prioritizing tasks**, and **organizing workflow** which ensured that critical tasks were addressed first, optimizing project efficiency by setting clear priorities, establishing a timeline that aligned with projects milestones.
- * Actively engaged in **listening** to team members during meetings as a team member in the development of a mechanical bridge model, while actively **collaborating** with team members and **supporting their initiatives** which built trust within the team and encouraged a positive environment.