

ADI WIWEKANANDA

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EDUCATION

Carleton University

Bachelor of Engineering in Electrical Engineering (4.0 GPA)

Ottawa, ON, Canada

September 2019 – April 2024

EXPERIENCE

Front-End Software Developer Intern

Ericsson

May 2022 – August 2023

Ottawa, ON

- Spearheaded the development of the Ericsson Indoor Planner webapp using React with TypeScript, increasing type safety and reducing runtime errors by 25%
- Collaborated with back-end developers to integrate RESTful APIs that fetch and display dynamic content, such as real-time data updates and user-generated content
- Architected a centralized state management system using Redux, enhancing data handling and reducing prop drilling for complex application states
- Initiated and enforced a code quality protocol by introducing a pre-commit hook that leverages Prettier CLI to format code, ensuring consistent coding styles across the team's contributions
- Conducted research and leveraged Azure Active Directory (AD) features to design a scalable authentication solution compatible with existing organizational infrastructure
- Organized and delivered a presentation to educate stakeholders on the latest front-end technologies, industry trends, and project operations to a large audience (>200 people)

Telecommunications (Data) Engineering Student Intern

Canadian Radio-television and Telecommunications Committee

May 2021 – August 2021

Gatineau, QC

- Developed Python scripts for data cleansing and transformation, and network packet analysis using TShark, enhancing data processing efficiency by 30% and improving network monitoring capabilities.

Teaching Assistant

Carleton University

September 2020 – April 2021

Ottawa, ON

- Conducted weekly lab sessions that reinforced ECE course material (Linux, Python) through hands-on programming exercises, resulting in a 10% increase in average student project scores.

PROJECTS

3D Scanner (Photogrammetry) System | *React, Flask, SQLite, Linux*

October 2023 – Present

- Architected and implemented a 3D scanning system using React.js and Flask on a Raspberry Pi, integrating an IMX519 camera and Apple's Object Capture API for advanced photogrammetry. Developed a responsive React single-page application (SPA) for effective user interaction and live image processing.
- Enhanced system performance by implementing multithreading in the Flask backend, enabling efficient handling of simultaneous API requests and real-time image processing, coupled with robust database management using SQLite.
- Optimized for a Linux environment, focusing on system stability and resource efficiency, while ensuring seamless communication between hardware and software components through RESTful APIs and real-time data transmission via web sockets.

NBA Statistics Web Application | *React, Node.js, Express.js, MongoDB*

October 2023 – Present

- Developing a full-stack web application providing real-time NBA statistics, player profiles, and the ability to create and manage fantasy basketball teams

Hand Motion-Controlled Vehicle | *Arduino, C++, Accelerometer, Wireless Communication*

Winter 2022

- Led C++ code development for an Arduino-based, hand motion-controlled vehicle addressing key challenges in data synchronization, sensor interpretation, and motor control algorithms for real-time responsiveness.

TECHNICAL SKILLS

Languages: JavaScript (TypeScript), Java, Python, C/C++, SQL, C#, MATLAB

Frameworks/Libraries: React, Flutter, Jest, Redux, Node.js, Express, JUnit, Material-UI, Flask, FastAPI, Puppeteer, pandas, NumPy, Matplotlib

Developer Tools: Git, Jira, MongoDB, Jenkins, Shell Scripting, VS Code, IntelliJ

Platforms: Linux, Microsoft Azure, Amazon Web Services, Docker