

# ADI WIWEKANANDA

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## EDUCATION

### Carleton University

Ottawa, ON, Canada

*Bachelor of Engineering in Electrical Engineering (4.0 GPA, 11.61 CGPA, Top 3% of Class)*

June 2024

**Relevant Coursework** *Computer Systems Design, Operating Systems, Data Structures, Machine Learning*

## EXPERIENCE

### Front-End Software Developer Intern

May 2022 – August 2023

*Ericsson*

*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

May 2021 – August 2021

*Canadian Radio-television and Telecommunications Committee*

*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

September 2020 – April 2021

*Carleton University*

*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 – April 2024

- Recognized for our project's excellence by winning the Best Poster Presentation award at the [Carleton University Poster Fair](#).
- Developed a 3D scanning system using React.js and Flask on a Raspberry Pi, integrating a Pi camera and Apple's Object Capture API for advanced photogrammetry.
- Implemented multithreading in the Flask backend to enhance system performance, coupled with robust SQLite database management.
- Optimized system for Linux environment, ensuring seamless communication between hardware and software components through RESTful APIs and web sockets.
- Developed a machine learning pipeline leveraging the YOLO object segmentation model to extract a clip from input images, creating a mask of the clip. Employed the LaMa inpainting model to inpaint the clip out of the image, effectively removing it from the original image.

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

Winter 2022

- Developed C++ code for an Arduino-based hand motion-controlled vehicle, optimizing I2C for sensor data synchronization. Implemented wireless communication for real-time responsiveness and precise motor control.

## 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, PyTorch, TensorFlow

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

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