Kieran Hulsman

Software Engineering Student

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Languages: JavaScript, Python, C/C++, SQL, TypeScript, Java, HTML/CSS, Scala, Bash, Assembly **Technologies:** React, Node, AWS (Lambda/DynamoDB/S3), Flask, Express, Axios, Git, Unix/Linux

Education

University of Waterloo

Sep. 2022 - Present

Bachelor of Software Engineering, Honours (BSE)

Waterloo, Ontario

- cGPA: 91% (3.9/4.0)
- Engineering Dean's Honours: awarded in term 2A for achieving in the top 10% of Software Engineering program
- Relevant coursework: data structures and algorithms (C/C++), compilers (Assembly/Scala)
- Class representative: Engineering Society, Software Engineering Society, Mathematics Society

Experience

Software Developer Intern

Jan. 2024 - Present

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- Toronto, Ontario
- Dynamically navigated the company's tech stack, developing frontend components, API routes, and database schema
- Personally contributed over 18,000 lines of code across 130 pull requests, reviewed for quality by senior engineers
- Enhanced code quality for client deliverables by spearheading a testing initiative, alongside full-time development work

Machine Learning Developer

Sep. 2023 - Dec. 2023

✓ WAT.ai

Waterloo, Ontario

- Worked to develop a machine learning model with a graduate researcher to forecast office building energy demands
- Gaining exposure to machine learning concepts by actively participating in weekly 5-person team meetings

Lead Coding Instructor

Apr. 2023 - Aug. 2023

Code Ninjas
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Code Ninjas

Aurora, Ontario

- Served as lead instructor, supporting the management of 15 staff members in their day-to-day operations
- Led 100+ educational coding sessions for children aged 5-14, teaching object-oriented programming, JavaScript and Lua
- Played a pivotal role in driving company growth from 0 to 100+ clients by conducting over 600 sales calls
- Ensured the smooth IT operations of the business by setting-up and maintaining the fleet of over 30 devices

Software Developer

Sep. 2022 - Apr. 2023

Formula Electric Design Team

Waterloo, Ontario

- Developed familiarity with version control and **Git CLI** commands by working in a code base with **300+ contributors**
- ullet Enhanced the car's error handling capabilities by leveraging ${f CAN}$ signals to broadcast signals across 6 boards using ${f C}$
- Reduced the risk of unexpected behaviour by utilizing MISRA-C lint tools to increase code reliability

Projects

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- Created a web application that leverages AI to transform user-uploaded handwritten notes into interactive flashcards
- Developed API endpoints to query a SQL database from Flask backend, enabling the site's CRUD functionality
- Designed flashcard components in **React** with **Tailwind CSS**, incorporating animated card-flipping features
- Utilized OpenAI's API to generate question-answer pairs from OCR-parsed user-uploaded images stored in AWS S3
- Implemented an authenticated login system to relationally store flashcard decks with users' accounts in a SQL database

PlanMyWeekend - AI Itinerary Planner | Node, React, Express, JavaScript, TypeScript, Tailwind CSS, OpenAI API

- Deployed an application that leverages OpenAI's API to plan engaging weekend itineraries tailored to users' cities
- Developed a Node backend using Express to facilitate API requests from my React frontend written in TypeScript
- Utilized a web-scraping API to gather real-time information on upcoming events and activities in the user-inputted city

☐ For All Times - Lounge Traffic Monitor | AWS, Python, Node, JavaScript, Git, HTML/CSS, Raspberry Pi

- Developed a traffic counter with an accuracy rate of 90%, making it easier to find quiet places to study
- Implemented an AWS Lambda function in Python to process data from a Raspberry Pi and update DynamoDB
- Integrated DynamoDB with a Node backend to track the number of students in a lounge with CRUD functionality
- Leveraged MQTT protocol to send entry/exit ultrasonic sensor data from Raspberry Pi to AWS Lambda function