

Alan Hu

416-859-5596 | 17.alanhu@gmail.com | hualan.ca

Education

Bachelor of Applied Science in Engineering, Queen's University, Kingston ON Sept 2022 – Present

- 3rd Year Computer Engineering at Smith Engineering

Work Experience

Full-Stack Engineer Intern, Speer Technologies, Toronto ON June 2024 – Present

- Assisted in building developing and deploying full-stack web applications using Next.js.
- Developed responsive UI components and integrated them with backend APIs.
- Met with clients to discuss project requirements, gather feedback, and ensure alignment with business goals.
- Collaborated with senior developers to troubleshoot and resolve bugs.

Engineering Building Supervisor, Engineering Society of Queen's University, Kingston ON Sept 2023 – Present

- A resource to engineering students in the Queen's Engineering Building by supervising the building after faculty hours.
- Providing students access to special equipment in the engineering building.

Apprentice Sprinkler Fitter, Vortex's Fire Protection, Toronto ON June 2021 – Sept 2021

- Collaboration with teammates to cut openings that accommodate for specific pipe sizes.
- Reviewed blueprints and project specifications to determine the correcting plumbing solutions at 3 different sites.
- Calculated the point loads of the pipes to ensure proper strength and installments of plumbing solutions.

Co-Curricular Activities

Data Analyst, Queen's Data Analytics Association, Kingston ON April 2024 – Present

- Hold tutorials and talks on topics such as Data Engineering, Statistical Analysis, Cloud Computing, Data Visualization and Presentation, and Sector-Specific Data Analytics.
- Working with companies and design-teams to extract data and identify valuable data patterns, trends, correlations, etc. from datasets.

IT Operation Manager, Engineering Society of Queen's University, Kingston ON April 2024 – Present

- Leading a team of students responsible for handling IT-related duties, which included resolving IT support tickets, overseeing user accounts in Microsoft Azure, and maintaining the operational integrity of EngSoc IT infrastructure.
- Understanding the core functions of an organization's IT system to develop and implement monitoring solutions for the Engineering Society's IT infrastructure, acquiring skills in server management and network security.

Personal Projects

InstaRecipe

- Developed a full-stack web application enabling users to upload pictures of ingredients, which then generates a recipe based on the classified ingredients.
- Utilized React.js for the user interface and Flask for the backend, integrating a pre-built machine learning model and the Spoonacular API for ingredient detection.

Walking or Jumping Prediction Model

- Designed a machine learning desktop app to distinguish whether a dataset was jumping data or walking data.
- Visualized the data in various ways, preprocessed the data by filtering the data using simple moving average.
- Added features and normalized the data to train the classifier.

To Do List Website

- Created a To Do List website using Python libraries Flask and SQLAlchemy, HTML, and CSS
- User inputs their task, storing it inside a SQL database and outputting the task using Python.

Excel Spreadsheet

- Using data structures and algorithms to mimic the functionality of excel spreadsheet.
- Concepts of linked lists and arrays to create dependencies for each cell

Skills

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- Programming: C, HTML/CSS/JS, Python, Java, JavaScript, React.js, Node.js, Flask, Express.js, Next.js,
 - Tools: Microsoft Office, Git, Docker