

JASON KHUU

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EDUCATION

Toronto Metropolitan University (TMU)

CGPA: 3.73/4.33

B.Eng. Electrical Engineering (Co-op)

Expected Graduation : May 2024

Undergraduate Research Award (2021): Granted \$10,500 by President's Office for high academic achievements to perform research.

TECHNICAL SKILLS

Languages: Python, C/C++, JavaScript, Java, CSS (Vanilla, Tailwind & Material UI), Matlab

Technologies: Node.js, React, Django (REST APIs), Flask, PostgreSQL, Firebase, AWS, Bash, Linux, Cron, Git, Postman & Raspberry Pi

EXPERIENCE

Advanced Micro Devices (AMD)

May 2022 – Aug 2023

Software Developer & Program Management Intern

Markham, ON

- Accelerated company wide priority assignment by developing a user-friendly data dashboard with React, Python (Django & Pandas) & PostgreSQL, empowering company stakeholders to make efficient data-driven decision on \$10,000,000+ priority lists.
- Developed a Python (Selenium) media scraping algorithm, using an AWS linux machine to run corntabs for daily updates.
- Built a team website using React, Python (Django REST APIs) & PostgreSQL that uses a custom designed content management system for easy information maintenance, improving cross team communication within the company.
- Automated weekly social media report using Python (Pandas & Python-pptx), saving 700+ hours annually.
- Remodeled bug tracking report system using Python (Hugging Face) NLP increasing report creation time by 200%.
- Designed a game feature PostgreSQL database, with a React website for simple database maintenance. Developed and deployed APIs on the internal company network using Python (Django REST APIs), reducing code redundancy within the company.
- Communicated with engineers and managers to road map and deliver AMD's C/C++ SDK (ADLX 1.1) from start to finish.

TMU - Department of Electrical, Computer & Biomedical Engineering

May 2021 – Aug 2021

Hardware Engineering Research Assistant Intern

Toronto, ON

- Designed and simulated a compact metamaterial PCB antenna array for wirelessly powering implanted biomedical deceives.
- Developed MATLAB scripts to calculate antenna parameters to easily optimize and create design requirements.
- Utilized MATLAB Simulink & HFSS to simulate 3D & 2D radiation patterns of the designed 4-patch linear antenna array.
- Analyzed S parameter & impedance diagram of the design using a simulated corporate feed network model with ADS & MATLAB.
- Wrote technical documentation reports, detailing the theory and design methodologies applied for the project.

EXTRACURRICULARS

MetHacks - TMU's Official Major League Hackathon

Jun 2020 - Present

Co-Chair & Vice President of Development

Toronto, ON

- Lead a team of 20+ students to plan & execute the University's official 800+ person Major League Hackathon (MLH).
- Oversaw all logistical, financial, corporate & development aspects of the organization for TMU's first official Hybrid Hackathon.
- Communicated with with company sponsors and stakeholders in order to secure over \$30,000 for the event.
- Designed and built the entire hackathon's web infrastructure (landing page, hacker portal & admin portal) with a team of 5+ designers & developers using React, Google Firebase, & Figma which was used by 2000+ individuals for the event.
- Setup and configured Firebase & Digital Ocean for website hosting, authentication management & database storage.

PROJECTS

Robotic Cat - Capstone | React, Python, C++, Arduino, Raspberry Pi, Firebase

Sep 2023 - Present

- Utilizing C++ (Arduino) and Python (Raspberry Pi & OpenAI) for controlling movement, vision and speech communication.
- Developing user app using React & Python (Flask APIs) to control & monitor the robot's movement and settings with Firebase.

Movie Script Analyzer | Python

Jan 2024

- Developed a web scraper to obtain movie scripts using Beautiful Soup & applied Natural Language Processing (NLP) data cleaning and encoding using Sklearn to then categorize movies based on similar features.

Media Center | C - ARM Cortex-M4 Board Development

Nov - Dec 2023

- Leveraged hardware features such as the joystick, LCD screen, and speaker on the MCB1700 board to develop a main menu for seamless navigation to distinct functionalities, including a photo gallery, an MP3 player, and a classic 1997 Snake game.

Dynamic Map Path Visualizer | React (Material UI), Python, Django, RestAPI

Feb 2023

- Developed a website using React & Python (Django REST API & Pillow) that lets the user input an image of a map, have it be rendered on the app's UI and then visualize a path form, from between user-edited routes and defined start-end points.

Public Transit Notification App | Python, React Native, Firebase

Jan 2023

- Built an app with React Native for people with hearing impairments to understand audio announcements using the UI.
- Utilized Python (Rev AI) to send real-time audio into a Firebase database, using (Co:here) NLP to categorize messages.