Maisey Perelonia

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Education

University of Toronto | BASc, Computer Engineering

- Relevant Coursework: Data Structures and Algorithms, Operating Systems, Computer Organization, Software Design, Computer Networks, Signals and Communication Systems, Compilers and Interpreters, Electronics
- Certificate in Music Technology
- Cumulative GPA: 3.70, Dean's Honour List (Fall 2020, Winter 2021, Fall 2021, Fall 2022, Winter 2023)

Technical Skills

Software: C/C++, Python/PyTorch, HTML/CSS, Qt, Object-Oriented Programming, MATLAB, Git, Linux, Java, LaTeX, Digital Audio Workstation (DAW)

Hardware: Verilog, ARM Assembly

Work Experience

Software Engineering Intern | Advanced Micro Devices (AMD) | Markham, ON

- Developed features in C++ and Qt QML in current and future builds of Radeon Graphics Software for gaming, ensuring that the backend and frontend work in conjunction with each other
- Debugged and resolved user experience issues in application builds raised by customers and Quality Assurance
- Communicated with software engineers and cross-disciplinary teams to discuss updates and establish goals

Projects

AI-Powered Personalized Beauty Shopping Site

- Process unformatted user input to determine their relevant characteristics and needs with the GPT-40 API
- Parse through major beauty retailers' catalogues and suggest beauty products through APIs and RAG LangChain

Chat Room

- Incorporated TCP and multithreading to open/close connections and send/receive multimodal messages between users
- Implemented features such as private and group messaging, register and persistent login, and logout efficiently
- Created data and ACK/NAK packets and dynamically changing maximum wait times to detect successful transmission of messages or dropped packets

Moodlist

September - December 2022

September 2020 - April 2025

May 2023 - April 2024

May 2024 - Present

February - April 2023

- Implemented a Recurrent Neural Network and fully connected network on data from Spotify API in Python, sorted by playlist keywords into five categories: Happy, Sad, Angry, Love, and Calm
- Worked on a team to design an application that determines listeners' moods based on recently listened songs
- Examined results to predict moods accurately 60% of the time, beating the 20% accuracy of a random guess

Dr. Mahdi

Safewaze

- Collaborated with teammate on our version of Dr. Mario in C on the DE1-SoC board and VGA monitor to clear viruses using coloured pills and detecting action from user keyboard inputs and interrupts
- Generated game map using randomizer and implemented chain reactions

January - April 2022

April 2022

- Designed a GIS map that promotes safer travel, coded in C++ and the EZGL library based on OpenStreetMap data
- Executed Dijkstra's algorithm and multithreading to find the fastest route between two points, decreasing the overall calculation speed by 40%
- Integrated map neighbourhood crime statistics using JSON data from the Toronto Police Database and visualized this data through colour and interactive buttons

Leadership

Executive Director | Tunes. Beats. Awesome. A Cappella, University of Toronto

May 2021 - May 2022

- Organized and managed weekly meetings with the entire group
- Planned logistics and collaborated with the music director and other members on arrangements