THOMAS HART

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SKILLS

LANGUAGES: Java, Python, C/C++, HTML, CSS, JavaScript, VHDL
FRAMEWORKS/LIBRARIES: Android SDK, AOSP, React.js, LibGDX
TOOLS: Git, GitHub, VS Code, Android Studio, JIRA, Confluence, Arduino

EXPERIENCE

Autonomous Vehicle Android Developer
Ford Motor Company · Jan. 2022 to Apr. 2022 · Remote

- Built Android applications using Java for an in-vehicle infotainment system.
- Leveraged hidden AOSP classes with minimal documentation to allow for a key feature to be implemented.
- Followed proper development practices to write clean and efficient code and documentation.

Computer Science Peer Tutor
Sir Winston Churchill Secondary School · Feb. 2021 to Apr. 2021 · Vancouver, BC

- Helped four classes of 15 students create and debug a variety of programs using basic Python.
- Acted as a leader and gave suggestions on how students could improve their programs.
- Exhibited great attention to detail by grading student's assignments based on a strict set of criteria.

PROJECTS

Personal Website (HTML, CSS, JavaScript, React.js)

- Created a personal portfolio website using HTML, CSS, JavaScript and React.js to showcase projects and experience.
- Used the EmailJS library to create a contact form to allow viewers to get in contact or ask questions.
- Designed the project to be easily scalable for future updates to the site.

Arduino LED Matrix Snake Game (C, Python)

- Used an Arduino Uno and an 8x8 LED matrix to implement the game "Snake".
- Created a Python script to listen for click input from computer keyboard and send it to the Arduino via the connected USB cable.
- Optimized the program to run efficiently, which is necessary for the LED matrix to function correctly.

Number Converter App (Java, Android)

- Used Java to create an Android application to allow users to quickly convert numbers between different number systems.
- Implemented functionality to convert between the 4 most commonly used number systems.

Crypto Terminal (Python)

- Created a command line application using Python to easily check various statistics related to cryptocurrency.
- Used the Coin Gecko API to request price data for the top 1000 cryptocurrencies by market cap.
- Worked with the mechanize and beautifulsoup4 libraries to scrape Minerstat for the current profitability of cryptocurrency mining hardware.

Discord Game Bot (Python)

- Worked in a team of 4 to create a Discord bot with the discord.py library that allowed users to play 3 different mini games.
- Implemented Rock-Paper-Scissors, Tic-Tac-Toe and Battleships games with the ability to play all 3 simultaneously.
- Managed strict time deadlines to complete the entire project within a 36 hour time period for a hackathon submission.

Mini Golf Game (Java, LibGDX)

- Learned how to use the LibGDX framework to create a mini golf video game for a high school capstone project.
- Created several different holes and designed the program in a way that allows for easy scalability and creation of new holes.
- Implemented realistic physics with friction to slow down the ball and conservation of momentum for collisions with walls.

EDUCATION

University of Waterloo · Sept. 2021 to Apr. 2026
Candidate for Bachelor of Applied Science in Computer Engineering
Relevant Courses: Fundamentals of Programming (C++), Digital Circuits and Systems (VHDL), Linear Algebra for Engineering