Cilo Chou

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EDUCATION

UNIVERSITY OF WATERLOO   B.As Software Engineering

Relevant Coursework: Software Engineering; Operating Systems; Algorithms; Artificial Intelligence

SKILLS

Coding Language: C, C++, HTML/CSS, Python, Javascript
Technical Skills: RTOS Design, UI design, Solidworks, AutoCAD, Automated Testing, iOS Development, Unity, Data Analysis

WORK EXPERIENCE

University of Waterloo Robotics Design Team   Waterloo, ON
Firmware Developer   Sep 2024 – Present

- Developed and tested embedded firmware in C++ and C for robotics drivetrain systems, utilizing tools like socketCAN and libusb to handle data transmission at speeds up to 1 Mbps, ensuring reliable communication and accurate output verification.
- Collaborated with a subteam of 15+ members to design, debug, and optimize firmware, reducing object orientation system errors by approximately 20% and improving overall efficiency for complex robotics applications.
- Integrated high-level drive control logic into the Robot Operating System (ROS), enabling seamless interaction between hardware and software components for advanced automation.

Walker Industries   Miami Gardens, FL
UI Designer   Jun 2024 – Dec 2024

- Engineered UI systems in Python, C# to support seamless integration with internal and external VR video game platforms built on Unity game engine, enhancing compatibility and user experience by 25%.
- Maintained and optimized a server relay system with 99.9% uptime, ensuring uninterrupted performance over a 5-month period.
- Conducted performance testing and debugging to identify and resolve bottlenecks, improving system response time by 15% and ensuring robust VR platform functionality.

PROJECTS

SE101Mitone - Music Keyboard | video demo   Dec 2024

- Designed and built a one-octave musical keyboard with 13 buttons mapped to chromatic notes in the fifth octave, using a Raspberry Pi Zero 2 W
- Developed custom software in C to integrate FluidSynth for real-time audio synthesis with sub-10ms latency and implemented GPIO event handling for precise note playback.
- Created a 3D-printed custom case (150mm x 60mm x 40mm) for enhanced durability and portability, with Bluetooth connectivity for wireless speaker compatibility up to 10 meters.

HerWorth - Wage Comparison Web Based Application   Sep 2024

- Developed a responsive, user-centric wage comparison web application using Python, HTML, CSS, JavaScript, and React.
- Integrated real-time data fetching from APIs, ensuring accurate salary information and reducing load times by 25%, while maintaining a streamlined and scalable backend architecture.

ACTIVITIES

Waterloo Engineering Society—Committee Member

- Coordinated athletic and wellness events by managing logistics, recruiting volunteers, and promoting engagement.

CanadaCyberSTEAMChallenge—Fund Development Director

- Increasing sponsorships by 15% through customer feedback analysis, cross-functional collaboration, and strategic reporting.

Technova Hackathon—Mentor

- Provided guidance on problem-solving, coding practices, and real-life project design and development.