Robert Crist

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Education

University of Washington, School of Engineering, Seattle, WA   *2018-Present*
Bachelor of Science in Electrical Engineering (Graduating Winter 2023)
In-Major GPA: 3.92/4.0
Cumulative GPA: 3.83/4.0
Dean's List: 2018, 2019, 2020, 2021, 2022

Experience

ENGINE Capstone: Octopus VR Experience Team – Seattle, Washington   *Dec 2021 – June 2022*
Game Developer
- Created an AI model to enable the tentacles to independently reach in and explore the interior of an object
- Implemented several core gameplay mechanics of the VR experience
- The project seeks to create a VR experience where users control a realistic octopus model

Embedded Systems Capstone: Smart Dog Collar– Seattle, Washington   *Sep 2022 – Present*
Embedded Systems Engineer
- Developed a smart collar that monitors the animal's temperature and notifies the owner if it reaches dangerous levels
- Created an Android application for the user which communicates to the device via Bluetooth Low Energy
- Designed a custom PCB the internals of the device using KiCad

Self Employed – Seattle, Washington   *Sep 2020 – Dec 2021*
Mathematics Tutor
- Tutored upper-level high school math courses to multiple students
- Enabled students to achieve their highest grade in math thus far as well as change their opinion on the subject
- Improved technical communication as well as metacognitive skills

Technical Skills

Experienced Programmer (Java, C, C#, Python)
- Designed a rubber band cannon that automatically aims on the vertical axis using Arduino and FreeRTOS
- Developed a visual .MIF file generator with python to aid in creating images on an FPGA display
- Created a function graphing tool in java using the drawing panel module

Skilled Circuit Designer (SystemVerilog, Breadboarding, MultiSim, KiCad)
- Developed a 64-bit pipelined ARM CPU using explicit logic and no blocks
- Created a multi-level maze game on an FPGA board
- Designed custom PCB's using KiCad

Creative Software and CAD Modeling (Unity, AutoCAD, Adobe Suite)
- Worked in a team using unity to create an octopus VR experience
- Experience in 3d modeling from course material
- Proficient in Photoshop, Premiere Pro, Illustrator, and After Effects from personal as well as academic projects

Relevant Courses

Data Structures and Algorithms; *VSLI II (Winter 2023);* Advanced Technical Communication; *Introduction to Database Systems (Winter 2023);* Computer Programming Series; Digital Circuits and Systems Series; Computer Architecture I; Devices and Circuits; Introduction to Embedded Systems; Circuit Theory Series;

Personal Links

Personal Website: https://robertcrist.github.io/
GitHub: https://github.com/RobertCrist
Octopus Research Group: http://arl.cs.washington.edu/ORG/
Embedded Systems Capstone: https://embeddedcapstone22.wordpress.com/