

Robert Crist

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Education

University of Washington, School of Engineering, Seattle, WA
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

2018-Present

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
- Worked with Bluetooth to transmit the signal from the microcontroller to the phone
- Created a mobile application using Android Studio to interface with the user

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)

- Developed a 64-bit pipelined ARM CPU using explicit logic and no blocks
- Created a multi-level maze game on an FPGA board
- Implemented Bresenham's Line Algorithm into an algorithm state machine

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 for course material
- Proficient in Photoshop, Premiere Pro, Illustrator, and After Effects from personal as well as academic projects

Relevant Courses

Digital Circuits and Systems Series; Computer Architecture I; Data Structures and Algorithms; Devices and Circuits; Introduction to Embedded Systems; Circuit Theory Series; Advanced Technical Communication;

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/>