

# Robert Crist

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## Summary

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Driven Electrical Engineering student seeking practical experience in the workforce. Focused on embedded systems with experience in both circuit design and programming. Strong willingness to learn with a commitment to seeing projects through. Interested in breaking into the intersection of hardware and software as well as machine learning and AI.

## Education

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**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

## Technical Skills

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### Experienced Programmer (Java, C, C#, Python)

- Designed a rubber band cannon which 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 (SystemsVerilog, 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
- Strong foundation in 3d modeling for course material
- Proficient in Photoshop, Premier Pro, Illustrator, and After Effects from personal as well as academic projects

## Relevant Courses

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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;

## Experience

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### 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
- Project seek to create a VR experience where users control a realistic octopus model

### 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

## Personal Links

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Personal Website: <https://robertcrist.github.io/>

GitHub: <https://github.com/RobertCrist>

Octopus Research Group: <http://arl.cs.washington.edu/ORG/>