ARTEM KULAKEVICH

Artem3@pdx.edu • **503.750.3225** • Beaverton, OR
linkedin.com/in/artem-kulakevich/

EDUCATION

Master of Science, Electrical Engineering — **GPA: 4.00 / 4.00** — **Jun 2019 – Present (Jun 2021)**
Portland State University — Portland, OR

Bachelor of Science, Electrical Engineering — **GPA: 3.97 / 4.00** — **Sep 2017 – Jun 2020**
Portland State University — *Summa cum laude* — Portland, OR

WORK EXPERIENCE

Production Specialist III — **Dec 2016 – Present**
Micro Systems Engineering, Inc. — Lake Oswego, OR

- Physically rewired and rebuilt 2 production imaging robot cells. Updated LabVIEW software used for automation of imaging robot.
- Trained an Epson 6-axis robot arm to process 3 new medical devices for production. Used inaccurate documentation for reference and fixed the documentation after gaining experience.
- Perform mechanical and electrical troubleshooting tasks on test fixtures, and production equipment.

SKILLS

- C++ / C
- Embedded Rust
- LTspice
- LabVIEW 12.0
- ARM / RISC-V Assembly
- Soldering
- SystemVerilog
- Oscilloscopes
- Git (Github)

PROJECTS

High Assurance Self Balancing Robot - Senior Capstone — **Jan 2020 – Jun 2020**
Project Sponsor: Galois, Inc. — Portland, OR

- Programmed a self-balancing robot to explore complex methods of control and formal verification.
- Altered a compiler in a verification tool called Kind2 to generate embedded **Rust** code from a verifiable language called **Lustre**.
- Used the modified compiler to generate an embedded **Rust** PID controller and Fuzzy logic controller. Found Rust PID to be within 5% of a controller written in **C++** for most characteristics.

RISC-V System-On-Chip Projects — **Oct 2020 – Dec 2020**

- Modified a RISC-V Swerve EH1 processor written in **SystemVerilog** and to interact more I/Os, VGA displays, and internal busses. Wrote **assembly** code used by the processor.
- Teacher's assistant used my code to teach other students how to implement the project.

MIPS-lite Simulator — **Apr 2020 – Jun 2020**

- Designed a 5-stage MIPS simulator in **C++** with timing analysis, hazard mitigation, and forwarding. Evaluated the simulator with a provided memory image.

Class AB Audio Amplifier — **Sep 2019 – Feb 2019**

- Designed a 10-watt audio amplifier circuit to gain experience with design process; used **LTspice** to plan out implementation. Soldered and tested the design using **oscilloscope** and power resistors.
- Amplifier reached 7.94W output with no distortion and 9.8W output with some distortion 0 – 20kHz.

ARM Sitara AM335x 32-bit Processor — **Sep 2018 – Dec 2018**

- Utilized ARM **assembly** and **C** to program a BeagleBone Black board to communicate with an RC8660 talker board over UART and a NewHaven LCD over I2C.
- Used datasheets and pseudo code to identify and plan modifications for peripherals. Implemented all necessary features using interrupts.

RELEVANT COURSEWORK

Computer Architecture • **Microprocessors 1 & 2** • ASIC: Modeling & Synthesis • **Digital IC Design** • Analog IC Design • **Formal Verification** • System-On-Chip