ARTEM KULAKEVICH

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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

- Updated, verified, and released LabVIEW software changes for a program used to control multiple automated imaging robots that processes 1000 – 1500 medical devices daily.
- Physically rewired and rebuilt 2 automated imaging robot cells that are used to process 300 medical devices each, daily.
- Performed LabVIEW code review for senior engineer on software used to monitor production equipment.
- 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.
- Updated, got signatures, and released a countless number of standardized company documents used for setting up equipment, performing tasks, and keeping record.

SKILLS

- C++ / C
- Embedded Rust
- ADC, SPI, I2C, JTAG
- LabVIEW 12.0
- ARM / RISC-V Assembly
- Soldering
- SystemVerilog
- Oscilloscopes
- Git (Github)

RELEVANT PROJECTS

High Assurance Self Balancing Robot - Senior Capstone **Jan 2020 – Jun 2020**

- Programmed a self-balancing robot to explore complex methods of control and formal verification. Created a website with an SQL database to provide a live feed of robot sensor data.
- 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.
- Helped multiple other students troubleshoot their project after completing mine. 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 pipelined MIPS simulator in C++ with timing analysis, hazard mitigation, and forwarding. Evaluated the simulator with a memory image provided by professor.

ARM Sitara AM335x 32-bit Processor **Sep 2019 – Dec 2019**

- Utilized ARM bare metal 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