**Artem Kulakevich**

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**OBJECTIVE:** Position in Embedded HW and SW engineering starting Q1 2022.

**EDUCATION**

**M.S., Electrical and Computer Engineering,** **GPA: 4.00/4.00**

Portland State University, Portland OR **(**Jun 2021)

**Courses:** Microprocessor System Design, System on a Chip Design with FPGAs, High Performance Digital Systems, Formal HW/SW Systems, Applied Optics, Computer Architecture, Digital IC Design I/II, Analog IC Design I, ASIC: Modeling & Synthesis.

**B.S., Electrical and Computer Engineering,** **GPA: 3.97/4.00**

Portland State University, Portland OR **(**Jun 2020)

**TECHNICAL SKILLS**

**Programming Languages:** Experienced with SystemVerilog, Verilog, LabVIEW

Experienced with Rust, C, C++, Assembly, Some work with Python

**Computer-based tools:** Experienced with Xilinx, ModelSim, CADENCE Virtuoso, LTspice

**Operating Systems**: Comfortable with Windows, Linux

**TECHNICAL PROJECTS/PRESENTATIONS**

**Embedded Rust High Assurance Self Balancing Robot**: Altered Kind2 compiler to generate embedded Rust from Lustre; generated working PID and Fuzzy controller. Integrated PID libraries into Arduino self-balancing robot code. Created a website with an SQL database to provide a live feed of robot sensor data.

**Embedded Rust Self Balancing Robot #2:** Programmed a self-balancing robot using embedded Rust only on a STM32F4 Discover board. Introduced Serial Bluetooth over UART, gyroscope over SPI, and accelerometer over I2C.

**SystemVerilog RISC-V SoC FPGA:** Modified a RISC-V processor written in SystemVerilog to introduce VGA, I/O, and a microcontroller. Programmed modified processor using RISC-V assembly code.

**SystemVerilog / Verilog Projects:** Traffic Controller, Binary to Gray Code Converter, FIFO Counter, Coin Machine, Gray Code Counter, Asynchronous FIFO

**C++ MIPS-lite Simulator:** 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.

**Class AB Audio Amplifier:** Designed a 10-watt audio amplifier circuit; used LTspice to plan out implementation. Soldered and tested the design using oscilloscope and power resistors.

**PROFESSIONAL EXPERIENCE**

**Design & Dev. Engineer**, Micro Systems Engineering, Inc. (Dec 2020 – Present)

* Equipment owner for 2 laser PCB depaneling systems that process all circuits in production.

(1000+ medical implants per day) Led projects to replace $180K UV laser source and $80K automated conveyance on laser system. Leading equipment purchasing and integration project for 2 additional laser systems. ($770K investment)

**Production Specialist**, Micro Systems Engineering, Inc. (Dec 2016 – Dec 2020)

* Performed LabVIEW software updates for multiple automated imaging robots used to image most production circuits. (1000+ medical implants per day) Programmed Epson 6-axis robot pick and place positions to introduce new products into the production line.