

# Artem Kulakevich

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## Education

Jun 2019 – **Master of Science, Electrical Engineering**, *Portland State University, Portland, OR.*

Present **GPA: 4.00/4.00**, *Expected: Jun 2021*

Sep 2017 – **Bachelor of Science, Electrical Engineering**, *Portland State University, Portland, OR.*

Jun 2020 **GPA: 3.97/4.00**, *Summa cum laude*

## Work Experience

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

- Present  
40 hr/week
- Perform troubleshooting, wiring, and soldering tasks on automated systems and fixtures.
  - Backup shift lead for production tasks, designated to assign work, and resolve communication issues.
  - Introduce new production steps, update production documents, and perform training.
  - Work on LabVIEW software changes for production imaging cells, including code reviews.

Sep 2019 – **Engineering Internship Project**, *Micro Systems Engineering Inc.*, Lake Oswego, OR.

- Jan 2020
- Worked with senior engineers to implement software changes to automated 4-axis imaging cell robot.
  - Introduced log4net logging to SQL, data collection to a digital factory, and changes to the state machine that reduced chances of collision and product loss.

## Skills

**Languages** C++, C, Rust, LabVIEW 12.0, ARM Assembly, SystemVerilog, Matlab

**Programs** Git, Linux (Ubuntu), Windows, LTspice, Cadence Virtuoso, Visual Studio, MS Office, SAP

**Hardware** Soldering, Oscilloscope (Tektronix/Rigol), Function Generator (Tektronix), Power Supply

## Projects

Jun 2020 – **Rust Self Balancing Robot**, *Rust, OpenOCD, GDB.*

Present Built a self balancing robot using STM32f303 Discovery board. Programmed wireless data telemetry and Madgwick filter for IMU sensor fusion using embedded Rust. Currently working on tuning and wireless controls.

Jan 2020 – **Senior Capstone**, *Rust, C++, Arduino, Kind2, Lustre, PHP, SQL, Apache2.*

Jun 2020 Modified Kind2 Lustre to Rust compiler to generate embedded Rust code from a verifiable language. Streamlined the process of creating verifiable embedded controllers. Found Rust PID controller to have identical real-world performance to controller written in C++.

Apr 2020 – **MIPS-lite Simulator**, *C++, Git.*

Jun 2020 Designed a 5-stage MIPS simulator in C++ and tested output with provided generic memory image. The simulator was able to perform basic data manipulation on memory image.

Sep 2019 – **CMOS Standard Library Design**, *Virtuoso 6.1.8, ADE, OCEAN/SKILL.*

Feb 2020 Designed standard library components using Cadence Virtuoso layout and ADE tools. Wrote scripts to simulate and measure output values with different temperatures, inputs voltages, and input rise times.

Sep 2019 – **Class AB Audio Amplifier**, *LTspice, Soldering, Oscilloscope.*

Dec 2020 Designed a complimentary symmetry audio amplifier using mostly discrete BJTs to drive a 10W speaker. Soldered, designed and tested using homelab equipment.

Sep 2018 – **ARM Sitara AM335x UART / I2C**, *ARM Assembly, C.*

Feb 2019 Programmed BeagleBone Black to communicate with an RC8660 talker boards and NewHaven LCD using assembly and C.