

Andrey Akhmetov

📞 518 253 0574 • ✉ akhmetov@cooper.edu • 🌐 akhmetov.me

Experience

- **Google** **New York, NY**
Software Engineering Intern, EngProd *Summer 2019*
Developed C++ tooling that tracks infrastructural dependencies of integration tests to better understand why they fail.
- **Google** **Kirkland, WA**
Software Engineering Intern, Tools and Infrastructure *Summer 2018*
Created a regression-testing service in Java to detect and avoid spurious test breakages resulting from environment changes.
- **Totem Power** **Bedford Hills, NY**
Electrical Engineering Intern *Summer 2017-Spring 2018*
Developed connected battery control and load management systems, from rough design to mass-production-ready PCB implementation. Work included analog metering, digital communication, and control of high-voltage/high-current buses.

Education

- **The Cooper Union** **New York, NY**
Electrical Engineering, 3.94/4.0 GPA. *2016–2020*
Graduate-Level Coursework: Bayesian Machine Learning, Deep Learning, Design for Custom DSP Hardware, Advanced Computer Architecture, Computer Graphics, Analog VLSI, Satellite Communications.
Professional and Honor organizations: Tau Beta Pi, Association for Computing Machinery, IEEE-*Eta Kappa Nu*
Academic Positions: Teaching assistant for Operating Systems and Analog VLSI.
- **Niskayuna High School, Class of 2016** **Niskayuna, NY**

Leadership and Group Projects

- **Covert Acoustic Transmission Scheme** *Fall 2019–Present*
Senior Project performed in partial fulfillment of undergraduate ECE degree at Cooper. Developing a system to transmit digital information over an inaudible wideband audio channel hidden under music.
- **Tooling Subteam Lead - HackCooper 2019** *Spring 2019–Fall 2019*
Led a team of five students working custom software tools to power the HackCooper hackathon.
- **Control Electronics Lead - Cooper Union Hyperloop** *Spring 2018–Spring 2019*
Acted as design lead and primary designer for the Cooper Union Hyperloop's electronic control systems, with a focus on a robust, modular design for safety, during the team's first season. Worked with the school administration and other stakeholders to resolve safety issues identified during the season.

Notable Personal Projects

- **CMOS Fully Differential Amplifier** *Spring 2019*
Designed a high-speed CMOS differential amplifier as a VLSI course project, using TSMC's 180nm process.
- **'QuickShade'** *Spring 2019*
Developed an environment for prototyping and experimentation with the OpenGL Shading Language.
- **CUDA 3D renderer** *Spring 2017*
Wrote a 3D-capable software rasterizer and shader pipeline using CUDA and C++ for learning purposes.
- **Queens Plaza Interlocking Simulator - Digital Logic Design Course** *Fall 2016*
Simulated signals and train control in the New York City subway using discrete CMOS logic and an FPGA.
- **'railfish' - Facebook Global Hackathon 2016** *Fall 2016*
Created routing engine and backend for a system that crowdsources realtime transit insights.
- **8-bit CPU on FPGA (Verilog, Spartan-3E)** *Summer 2015*
Implemented an 8-bit CPU core. Created custom ISA and test programs to verify functionality.

Noteworthy Programming Contests and Awards

- **Bloomberg CodeCon** 29th place globally, 2018
- **Greater New York Region ACM Competition** Cooper Union team 1, 9th place, 2018