

Andrey Akhmetov

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Experience

- **Google** **Kirkland, WA**
Software Engineering Intern, Tools and Infrastructure *Summer 2018*
Created a service in Java to thoroughly evaluate testing environment changes before rolling them out to product teams, in order to avoid spurious test breakages.
- **Totem Power** **Bedford Hills, NY**
Electrical Engineering Intern *Summer 2017-Spring 2018*
Designed power electronics systems for use within company's product. Tasks included preliminary design, prototyping, design of production-ready surface-mount technology circuit boards including analog and power considerations, and embedded programming of realtime control software with focus on safety, reliability, manufacturability, and cost.
- **Cooper Union Complex Fluid Physics and Engineering Lab** **New York, NY**
Student Researcher *Summer 2017*
Designed a miniaturized autonomous boat control expansion board providing sensors, power, telemetry, and motor control to an Arduino Fio. Built a FDM 3D printer and designed turnkey workflow to support ongoing research.

Education

- **The Cooper Union** **New York, NY**
Electrical Engineering, 3.91/4.0 GPA. *2016–2020*
Relevant coursework: Operating Systems, Machine Learning, Computer Architecture, DSP, Electronics, Computer Graphics.
Professional and Honor organizations: Tau Beta Pi, Association for Computing Machinery, Society of Motion Picture and Television Engineers
- **Niskayuna High School, Class of 2016** **Niskayuna, NY**

Notable Projects

- **Cooper Union Hyperloop** *Fall 2018-Spring 2019*
Designed electronics hardware for a vehicle intended for the SpaceX Hyperloop competition.
- **HackCooper 2018** *Fall 2018*
Helped to organize a 24-hour hackathon at the Cooper Union. Worked with sponsors to secure funding and arrange technical outreach and mentorship for participants.
- **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 signalling and train control in the New York City subway system using discrete CMOS logic and an FPGA.
- **Airdrop-capable UAV** - *Eng. Design and Problem Solving Course* *Fall 2016*
Wired and configured the control systems for a quadcopter capable of precisely dropping parcels of food.
- **'railfish'** - *Facebook Global Hackathon 2016* *Fall 2016*
Used Java to write routing engine and backend for a project designed to crowdsource public transit data and provide travel suggestions based on performance and crowding.
- **'concert.fish'** - *HackCooper 2016 Hackathon (winning project)* *Fall 2016*
Wrote backend, demo, and machine learning designed to socially connect musicians and listeners in realtime.
- **'SafePlug'** - *High School Engineering Capstone Project* *2015-2016*
Designed, produced, and tested product designs of an electrical outlet cover for blind users using 3D printing and CNC milling. Worked with the Northeast Association for the Blind at Albany to test prototypes for feedback.
- **8-bit CPU on FPGA (Verilog, Spartan-3E)** *Summer 2015*
Designed and optimized an 8-bit soft-core CPU using existing Picoblaze product capabilities as design target. Created custom ISA and wrote demonstration programs capable of running on this architecture.

Technical and Personal skills

- **Programming and Software Tools:** Java, Kotlin, TensorFlow, Verilog, C, C++, MATLAB
- **World languages:** Russian (highly fluent), Spanish (intermediate), German (intermediate).

Noteworthy Programming Contests and Awards

- **Hackathons** HackCooper 2016 winner, Facebook Global Hackathon competitor
- **NYU ProgNova** Fifth place globally in ICPC division, 2016
- **Bloomberg CodeCon** Cooper Union winner, 2016, 2017
- **Greater New York Region ACM Competition** Cooper Union team 1, 9th place, 2018