

Andrey Akhmetov

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Experience

- **Google** **Kirkland, WA**
Software Engineering, Tools and Infrastructure Intern *May 2018-August 2018*
Created a service to thoroughly evaluate testing environment changes before deploying them to continuous integration.
- **Totem Power** **Bedford Hills, NY**
Electrical Engineering Intern *June 2017-May 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 Computational 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. Constructed a 3D printer and designed streamlined workflow to support ongoing research.

Education

- **The Cooper Union** **New York, NY**
Electrical Engineering, 3.91/4.00 GPA. *2016-2020*
Relevant coursework includes DSP, machine learning, operating systems, hardware design, communication theory, and advanced computer architecture.
- **Niskayuna High School, Class of 2016** **Niskayuna, NY**

Notable Projects

- **Internet Meme Classifier** *Summer 2018*
Implemented a tool to classify Internet humor based on its image content, using machine learning.
- **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** *December 2016*
Simulated signalling and train control in the New York City subway system using discrete CMOS logic and an FPGA.
- **'railfish' - Facebook Global Hackathon 2016** *November 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)** *September 2016*
Wrote backend, demo, and machine learning designed to socially connect musicians and listeners in realtime.
- **FTC Optical Navigation Sensor** *Summer 2016*
Designed an optical navigation sensor for competitive robotics teams. Laid out PCB using SMT technology, sourced difficult-to-find components, and programmed an onboard Atmel microcontroller as a customized I²C to SPI bridge.
- **'SafePlug'** *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 CPU.

Technical and Personal skills

- **Programming and Software Tools:** Java, Kotlin, Verilog, C, C++, Xilinx ISE, KiCAD
- **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
- **IBM Master the Mainframe** Three-time part 1, 2 winner, two-time part 3 honorable mention
- **Bloomberg CodeCon** Cooper Union winner: 2016, 2017. 28th in 2018 world finals.
- **Greater New York Region ACM Competition** Cooper Union team 1, 18th place, 2016