

## Programming

- Java
- Python
- Javascript
- C
- HTML/CSS
- Verilog
- OCaml
- Assembly

## Technology

- NodeJS
- LevelDB
- Express.js
- Hapi
- Raspberry Pi
- Arduino

## Operating Systems

- Windows
- Linux

## Languages

- English
- Russian
- German

## Interests

- Jazz Piano
- Theater
- Vinyl collecting
- Fishing
- Skiing
- Logic games

## Education

**University of Pennsylvania – School of Engineering & Applied Science** Philadelphia, PA  
B.S. Engineering: Computer Science | Minors: Mathematics and Physics May 2020  
3.41/4.00  
→ Coursework: Statistics & Machine Learning, Data Structures & Algorithms, Computer Organization & Design, Introduction to Computer Systems, Programming Languages & Techniques, Complex Analysis, Advanced Linear Algebra

## Projects

**iCane** | <https://github.com/pixelunicorn/icane> January 2018

- (Raspberry Pi, C) A cane powered by Raspberry Pi that uses ultrasonic sensing to detect and recognize objects to assist the visually impaired.
- (HTML/CSS, Javascript) A web app that uses beacons placed in buildings to send the user his location, which is converted to audio via a text-to-speech API.
- Third place, organizer's choice, and Globo sponsorship prize at DragonHacks.

**Othello** | <https://github.com/kofmangregory/Othello> December 2017

- (Java) The game Othello using Java's Swing package.

**Thermal Conductivity Calculator** May 2017 – August 2017

- (Python) An applet to calculate the heat energy across various materials with various geometries using data from NIST.

**SmartCup** | <https://github.com/DanBarychev/SmartCup> September 2015

- (Arduino) A cup holder powered by Arduino that reports the ideal drinking temperature of a liquid.

## Professional Experience

**Balloon-borne Large Aperture Submillimeter Telescope**, Researcher March 2017 – Present

- Developed the thermal conductivity calculator, updated and upkeep the website, built a hard drive tower in a vacuum vessel, assembled and tested a solar panel array, and cycled a cryostat to test its helium fridge.

**Mechanics Laboratory**, Teaching Assistant August 2017 - Present

- Set up laboratory equipment, explained lab procedures, graded lab reports, and answered mechanics questions.

**Penn Summer Science Initiative**, Researcher June 2015

- Collaborated in teams of four students in four week-long lab activities with intensive lab reports and presentations.
- Tested the strengths of concrete mixtures, observed the diffusion of metals, stress-tested polymers, and constructed an OLED.

**MedSurvey, Inc.**, Call Center Representative Summer 2014 and Summer 2016

- Screened medical personnel for eligibility in medical market research surveys.

## Involvement

**Stimulus Children's Theatre**, Technical Director, Lighting Designer August 2017 – Present

**Undergraduate Physics Society** August 2016 – Present