# Gregory Kofman

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### Programming

- Java
- Python
- JavaScript
- C
- C++
- Verilog
- OCaml

### Frameworks & Tech

- Tensorflow
- Keras
- Git
- Node.js
- jQuery

### Languages

- English
- Russian
- German

### Interests

- Jazz piano
- Theater lighting
- 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
3.35/4.00

- Coursework: Statistics & Machine Learning, Data Structures & Algorithms, Computer Organization & Design, Introduction to Computer Systems, Complex Analysis, Advanced Linear Algebra, Scalable & Cloud Computing, Operating Systems, Automata, Computability, and Complexity, Networked Systems

## Professional Experience

**Google**, Software Engineering Intern — May 2019 – August 2019

- Designed, implemented, tested, and launched a modified distributed system for assigning messages to servers efficiently and at scale within Google's Publisher-Subscriber service

**Infosys Ltd. InStep Program, Bengaluru**, Deep Learning Intern — May 2018 – August 2018

- Developed a new method for determining how neural networks make decisions by analyzing outputs of FaceNet; novel method to be pursued further by Infosys
- Improved neural network for plant disease detection by modifying layers, tuning parameters, and retraining; packaged analytical model into mobile application
- Created an intuitive web application for building and exporting neural net models by clicking on visual layers; allows users to export a Python script with Keras implementation of the model; used by Infosys to train employees

**Balloon-borne Large Aperture Submillimeter Telescope**, Researcher — March 2017 – March 2018

- Developed thermal conductivity calculator, built hard drive tower in a vacuum vessel, assembled and tested solar panel array, and cycled a cryostat to test helium refrigeration

## Select Projects

**mHealth** — February 2018 – Present

- Created an iOS application that guides nursing staff through cardiac arrest procedures, records events in database, and alerts for required actions
- Used by nursing staff at the University of Pennsylvania Hospital

**PlantVillage** — July 2018

- Applied transfer learning from the Inception V3 model to classify plant diseases in crops; achieved test accuracy of 88%

**iCane** — January 2018

- Created cane powered by Raspberry Pi that uses ultrasonic sensing to detect and recognize objects to assist visually impaired individuals
- Developed web application that uses beacons placed in buildings to provide user location information via audio
- Won third place, organizer's choice, and Globo sponsorship prizes at DragonHacks

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

- Created applet to calculate heat transfer across materials with various geometries using data from NIST

## Involvement

**Mechanics Laboratory**, Teaching Assistant — August 2016 – Present
**Stimulus Children's Theatre**, Technical Director, Web Master, Lighting Designer — August 2016 – Present