

# ILAN BIGIO

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## EDUCATION

### Brown University

Providence, RI • Graduated May 2020

Concentration Computer Science Sc. B. • GPA: 3.9

## TECHNICAL SKILLS

Languages Python, Go, C, Bash, JavaScript, Java, C++, Scala, HTML, CSS, MATLAB

Frameworks React, Redux, p5.js, Next.js

## PROFESSIONAL EXPERIENCE

### Google, Software Engineer – YouTube Shorts

San Bruno, CA • Aug 2020 - Present

- Built and launched dozens of early features for YouTube Shorts, working fullstack (iOS & Android, C++ server).
- Contributed to a multi-quarter migration by designing new hybrid fullscreen mode for the Shorts Player.
- Wrote metrics framework in Go to analyze user sessions and present results of a major feature launch to VPs.
- Distilled 100+ pages of docs into single team launch checklist, significantly reducing onboarding friction.

### Twitter, Software Engineering Internship – API & Developer Experience

San Francisco, CA • Summers 2018 & 2019

- Led team of 12 in a customer-facing redesign to Twitter Developer Portal, revamping dashboard billing flow.
- Held inception meeting with 15 engineers, producing 40 tickets, and then wrote 16 page technical design doc.
- Proposed and wrote Python script to modularize hundreds of tests, cutting review times from days to minutes.

### Brown University, Head Teaching Assistant & SysAdmin

Providence, RI • Spring 2018 - Fall 2019

- Trained and managed a staff of 40 for Computer Systems, a class of 350 students, with a focus in scripting.
- Responsible for helping students debug 4hrs/wk, and spent over 30hrs grading over 50 project submissions.
- Administered departmental system for Brown CS, managing permissions, accounts, file systems, and networks.

## PROJECTS

### Lyft Bikes API Vulnerability, ↻ Python (Asyncio)

San Francisco, CA • Summer 2019

- Reverse engineered Lyft Bikes API to add remote-unlock functionality, and discovered a vulnerability.
- Performed MitM on my phone for auth and endpoints, then multi-threaded wave of requests to guess bike id.
- Discovered and reported a vulnerability in the API, allowing Lyft to fix it, and received a \$500 bounty.

### Deterministic Minesweeper, ↻ Python (Numpy) • JS (P5JS) • Heroku

San Francisco, CA • Summer 2019

- Developed a version of minesweeper where every game played is provably solvable, using Numpy and P5JS.
- Designed a highly-performant solver that uses convolution to generate and analyze thousands of boards / sec.
- Implemented board pre-computation and client-side board caching to significantly reduce page loading times.

### Weenix (Small Unix) Operating System, ↻ C (a lot of it)

Providence, RI • Spring 2019

- Implemented Unix-like operating system in a semester-long project, writing 3,500 lines in a 30,000 codebase.
- Built kernel modules for processes, threads, drivers, a virtual filesystem, S5FS, and virtual memory.

### Course Registration Assistant, ↻ Python (Flask) • Bash • Twilio • Heroku

Providence, RI • Fall 2016 - Spring 2019

- Deployed app to monitor course availability, designed for use entirely through SMS (clients need no internet).
- Designed through a two-year iterative process, adding modules and re-writing code with newer APIs.

## INTERESTS

### Hobbies

Film Photography, Visual Effects, Physics Stuff, Piano, Board Games, Liar's Dice, Hiking