

# ILAN BIGIO

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## EDUCATION

### Brown University

Providence, RI • Graduating May 2020

*Concentration* Computer Science Sc. B. – GPA: 3.8/4

*Coursework* In Depth Algorithm Analysis, Operating Systems, Machine Learning, Software Security, Software Engineering, Computer Networks, Statistical Inference, Functional Programming

## TECHNICAL SKILLS

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

*Frameworks* React, Redux, P5JS

## EXPERIENCE

### Twitter, Fullstack Engineering Intern – Developer Experience Team

San Francisco, CA • Summer 2019

- Led team of 12 in a customer-facing redesign to Twitter Developer Portal, revamping dashboard and billing flow.
- Held inception meeting with 15 engineers, producing 40 tickets, and then wrote entire technical design document.
- Spent a week migrating 22 website routes to a new layouts pattern, writing over 500 lines of React in 11 files.

### Twitter, Backend Engineering Intern – Account Activity API

San Francisco, CA • Summer 2018

- Led development of data delivery validation framework, that bolstered security and deployment confidence.
- Proposed and wrote Python script to modularize hundreds of test cases, cutting review times from days to minutes.
- Gained experience developing with Scala's and Twitter's Libraries (Futures, Modules, Dependency Injection, etc).

### 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.
- Administer departmental system for Brown CS, managing permissions, accounts, file systems, and networks.

## PROJECTS

### Lyft Bikes API Experiment, ⇄ 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 own 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 full 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 over 10,000 lines of C.
- Built kernel modules for processes, threads, device drives, a virtual filesystem, and the System V Filesystem.

### 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* Filmmaking and Visual Effects, Physics Stuff, Piano, Board Games, Liar's Dice, Hiking, Paddle Boarding