James A. Anderson

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# **EDUCATION**

### • NYU, Courant Institute of Mathematical Sciences

New York, NY

B.A., Computer Science and Mathematics

Sept., 2017 - May, 2021

Relevant Coursework: Data Structures, Computer Systems Organization, Basic Algorithms, Operating Systems, Discrete Math, Linear Algebra, Calc II-III

#### EXPERIENCE

• Google Mountain View, CA

Software Engineering Intern

Summer 2019

• Mapping Geo UGC: Visualized Geo User Generated Content (i.e., reviews, photo contributions, edits) in Earth Engine. Visualizations included heatmaps and charts. Written in Javascript and fed data using Java and a Google-specific SQL. With the newly added visual element, identified trends and anomalies in the data.

Google CodeU

Mountain View, CA

Participant

Summer~2017

• Chat: Added to an existing Java chat server/client. In a team consisting of 2 other participants and a Google engineer, designed and implemented versioning, state saving, subscriptions, and access levels.

## • UCLA, Elegant Mind Laboratory

Los Angeles, CA

Researcher

 $Summer\ 2016$ 

- Neuron Mapping: Developed MATLAB software to identify and chart the activity of the neurons of the C. Elegans worm in 2D & 3D.
- **Preprocessing**: Implemented multiprocessing and other techniques to save up to an hour of time preprocessing images in the lab. Also automated it (until then it required preprocessing by hand).
- KJ Algorithm: Responsible for the KJ algorithm, named after another researcher and myself.

# • Tesorio (Y Combinator S15)

Palo Alto, CA

Software Engineering Intern

 $Summer\ 2015$ 

- API: Built the Python/Django internal API from the ground up.
- **Dashboard**: Converted the dashboard front end architecture to React.js components. Some visualization development with Google Charts.
- Mailer & Backend: Development of the mailer and Django backend. Communicated with a remote Philadelphia team weekly to coordinate efforts.
- Staging & Deployment: Debugged pushes from development to staging to allow for clean production deployments.

• Planet Argon

Software Engineering Intern

Portland, OR Summer 2013

- **Github Dashboard**: Developed internal tool to track Github contributions (helpful to non-technical roles). Built with Ruby on Rails, implementing the Github API. Practiced Test Driven Development.
- Hydra: Developed internal tool in Ruby on Rails. Practiced Test Driven Development. Used d3.js visualization.

#### Projects

- Homebrew-Bundle: Rewrote the Ruby Domain Specific Language. Added support for homebrew-cask library. Since then, the project has been added to the main Homebrew github, and I was named as a contributor. Had the second most contributions to the repository.
- Haystack: Using MongoDB and Go, I built an API for processing payments, authenticating users, searching for listings by location and keyword. In addition, I built an Objective-C iOS application to interact with the Go backend API. Unfortunately, it no longer works with the termination of the Balance payment API, but I have plans to continue work on it.

#### AWARDS

- HSHacks Hackathon: Won 2nd Place for an application called Tsh, implemented in Rails. Tsh allowed access to information like the weather, Facebook, etc all via SMS commands instead of a data plan. Implemented the Twilio and Facebook API (among others).
- FTC (FIRST) Robotics: Won Judge's Trophy. Acted as lead programmer.

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