

# Ben Haines

U.VA. UNDERGRADUATE

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## Education

### University of Virginia

Charlottesville, VA

DOUBLE MAJOR IN COMPUTER SCIENCE AND MATHEMATICS

2013 - 2016

- Cumulative GPA: 3.98, Major GPAs: 4.00
- Echols Scholar
- Dean's List all semesters
- Intermediate Honors recipient

## Experience

### Commonwealth Computer Research Inc.

Charlottesville, VA

SUMMER INTERN

2015

Worked as part of a team creating software to demo for a government contract. Specific Experiences:

- Use of neural networks to detect patterns in time series data and attempt to predict future events.
- Use of techniques such as response surface methodology and simulated annealing to solve resource allocation optimization problems.
  - Potential locations for resource distribution centers to maximize efficiency in a natural disaster scenario.
  - Create plan to repair roads and other infrastructure in order to minimize person hours spent without resources.

### PrepFactory

Washington, DC

SUMMER INTERN

2014

Learned components requirement for a successful startup including marketing, press strategy, and financial operations. Also became familiar with productivity tools like Microsoft Excel and web services such as Elance, Optimizely, and Basecamp. Specific Experiences:

- Organization of an online SAT test bank
  - Organization and formatting of question database
  - Design of accompanying experience level gamification system
- Python web scraping

## Projects

### FOMC Sentiment Analysis

TEXT MINING GROUP PROJECT

2016

Used Stanford Sentiment Analysis and CoreNLP java packages to analyze the minutes of the Federal Open Market Committee and generate predictions for medium-range performance of sectors of the S&P 500.

### Math Expression Search Engine

INFORMATION RETRIEVAL GROUP PROJECT

2016

Used Antlr and leaf-root expression trees to create a prototype search engine for mathematical expressions.

### Diminished Reality

COMPUTER VISION GROUP PROJECT

2015

Attempted to create a system for the detections, removal, and infilling of objects in videos. Used OpenCV and PatchMatch to implement the infilling algorithm described by Barnes.

### Personal Project

SNAPMECATZ

2013

Co-created a webapp with a group of friends that uses the python bottle framework and the snapchat API to deliver daily pictures of cats to subscribers' snapchats.