

## Education

### New York University

3.14 GPA M.S. [Computer Science](#), May 2016

Course:

Distributed Systems

- Implemented scalable NoSQL key-value databases using the golang programming language

### University of California, Berkeley

3.01 GPA B.S. [Bioengineering](#), May 2012

Courses:

Operating Systems & Systems Programming

- Added Java code to a distributed NoSQL database that used the 2 Phase Commit protocol

Great Ideas in Computer Architecture

- Used C, OpenMP, and Intel AVX to maximize matrix multiplication speed. Implemented a MIPS CPU.

## Experience

### [OpenText](#), Software Engineer (March 2017 to Present); Foster City, CA

- Worked on content management systems (websites that are used to make websites).
- Created a redirect service that redirects users to a service that contains help documentation. Designed a microservice and implemented it with Java. The microservice is a Java servlet that runs on JBoss. The servlet is a non-REST web service; I didn't make it RESTful because the data were not entity based. The help pages were organized hierarchically as opposed to being entity based.

### [HyTrust](#), Software Engineering Intern (Jun 2016 to Sep 2016); Mountain View, CA

- Used Python to implement programs that send summary emails to customers.
- Was part of a mission critical team that serve many government agencies and financial service companies: <https://www.hytrust.com/solutions/data-sovereignty/>

### [E\\*TRADE Financial](#), Software Engineer (Jul 2012 to Aug 2014); Menlo Park, CA

- Worked on the Fraud Prevention team and made programs that allow fraud analysts to visualize data.
- Used Python to parse log files, generate JSON objects, and generate interactive D3.js visualizations.
- Created a web app (w/ Perl CGI as the backend) that allows fraud analysts to generate D3.js visualizations.
- The web app accesses log files from a Hadoop cluster and parses the log files.
- Implemented custom sorting and filtering features on scatter plot graphs with D3.js.

## Selected Projects

### [Distributed NoSQL Key-Value Database](#):

- Created a Key-Value database that is sharded and replicated.
- The db has no single point of failure because it uses Paxos to replicate data across nodes.
- Not all nodes are responsible for all data; groups of nodes save certain shards of the data.
- Shard reorganization code allows nodes to join the db's cluster of nodes and scale horizontally.

### [Address Book](#):

- Created a Java API that could be used to create address books: [tmnt-raphael.github.io/AddressBook](https://tmnt-raphael.github.io/AddressBook)

## Languages and Technologies

Proficient: Java, Python

Exposure: JavaScript, HTML/CSS, C, Go, Git/GitHub

## Awards

3rd Place, Intuit's Hackathon at UC Berkeley (2016)

Mathematics Achievement Award, Bank of America (2007)