

# Brandon Zhang

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## Education and Activities

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**Cornell University, B.S. in Computer Science (May 2016, GPA: 3.92), M.Eng. (December 2016 Expected)**

- Association of Computer Science Undergraduates, Treasurer
- Relevant Courses: Compilers, Databases, Operating Systems & Practicum, Advanced Programming Languages, Machine Learning for Data Science, Natural Language Processing, Theory of Computing

**Thomas Jefferson High School for Science and Technology 2013**

## Work Experience

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**Facebook, Software Engineering Intern**

**Summer 2016**

- Worked in the Core Data Infrastructure team on a distributed storage system
- Designed and implemented a protocol for configuration synchronization to ensure that all nodes maintain a consistent view of the cluster

**Cornell University, Undergraduate Research**

**August 2015 – June 2016**

- Worked with a team under Nate Foster to develop a way to measure network traffic at end hosts
- Integrated our query language compiler with our end host measurement system to create the proof-of-concept implementation used in our paper

**Cornell University, Teaching Assistant**

**Fall 2015 – Present**

- CS 3110 Functional Programming & Data Structures, Fall 2016, Graduate TA
- CS 4820 Introduction to Analysis of Algorithms, Spring 2016, Undergraduate TA
- CS 4320 Introduction to Database Systems, Fall 2015, Undergraduate TA

**MongoDB, Software Engineering Intern**

**Summer 2015**

- Worked on geospatial performance improvements, focusing on geoNear queries
  - Implemented optimizations that allowed geoNear queries to keep track of the area covered by previously scanned index cells
  - Included work in the 3.2 release of MongoDB described here: <http://goo.gl/SJYJRJ>
- Created a proof-of-concept implementation of geoNear allowing queries with lines and polygons (e.g. finding the closest restaurants to your route)
  - Won the Skunkworks (3-day company-wide hackathon) award for “Best Use of MongoDB”

**Talentshape (talentshape.com), Co-Founder**

**2013-2014**

- Created a learning management system designed to make course creation, analytics, and compliance requirements simpler for businesses
- Wrote the Sharable Content Object Reference Model (SCORM) engine for our site
  - Created a system to automatically generate a course based on a manifest file and resources provided in a user-uploaded content package

## Projects

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**ogc** ([github.com/brandonwzhang/compilers](https://github.com/brandonwzhang/compilers)) (2016) – a compiler for an object oriented language, Xi.

**MovieCluster** ([moviecluster.herokuapp.com](http://moviecluster.herokuapp.com)) (2015) – web application that enables users to find a movie to watch using k-means clustering. By successively clustering based on chosen fields and throwing away unwanted clusters, users can narrow the movie selection down to a manageable number of choices.

**Embox** (on Chrome Web Store) (2014) – Chrome extension that allows users to embed a website of their choice into any div on a webpage. Designed an intuitive user interface allowing users to store their favorite websites in the extension.

## Publications

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Haoxian Chen, Nate Foster, Jake Silverman, Michael Whittaker, Brandon Zhang, and Rene Zhang. **Felix:**

**Implementing Traffic Measurement on End Hosts Using Program Analysis.** In *ACM SIGCOMM Symposium on SDN Research (SOSR)*, Santa Clara, CA, March 2016.