Martin Zhu

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EDUCATION

BROWN UNIVERSITY
BS in Computer Science
Expected May 2017 | Providence, RI
Major GPA: 3.5 / 4.0

NASHUA HIGH SOUTH
Grad. May 2013 | Nashua, NH
GPA: 4.96 / 5.0

LINKS

Github: https://github.com/xytosis
Medium: https://medium.com/@mz

COURSEWORK

UNDERGRADUATE
Computational Biology *(Current)*
Algorithms *(Current)*
Database Systems *(Current)*
Software Engineering
Computer Systems
Functional Programming
Data Structures
Computer Systems and Security
Theory of Computation
Discrete Mathematics

SKILLS

PROGRAMMING
Scala • Java • Python
C • R • SQL • Go
Javascript/JQuery • HTML/CSS
PHP • LaTeX

TECHNOLOGIES
Apache Spark • Lambda Architecture
Apache Kafka • HDFS
LAMP Stack • Docker • MongoDB
Neo4j • Git • Linux/Windows/Mac
MySQL • VirtualBox • Eclipse

HONORS

• Founding member and constitution drafter of the Brown Data Science Club
• Jane Street Estimathon winner

EXPERIENCE

VELANKANI | Data Science Intern
Mar 2015 – Sep 2015 | Atlanta, Georgia

- Worked with the CTO and used Apache Spark, Kafka, Hadoop, MongoDB and Neo4j to build distributed data analysis application called Dataworx.
- Designed architecture for live stream data analysis based on Lambda Architecture and implemented an example with Twitter streaming data. Found that job availability according to Twitter is an illusion.
- Project open sourced with Apache 2.0 license and placed on my Github.

MAHI TECHNOLOGIES | CoFounder and Engineering Lead
May 2015 – Current | Nashua, NH

- Our first product MAHI, or Machine Amplified Human Intelligence, can be found at https://mahi.tech. We have received multiple funding offers.
- Created to seamlessly enhance human knowledge in conversations, research, and meetings. The system uses speech recognition to identify topics in conversation and makes intelligent decisions about the subject to display information and gather other topics that are relevant.
- Designed and implemented the entire backend and parts of the UI, manages web hosting and API usage.

BROWN DEPARTMENT OF CS | Undergrad Teaching Assistant
January 2015 – Current

- Duties include holding weekly office hours, grading homework and exams, and developing course material such as homework questions or code contributions.
- Fall 2015 - CSCI0330, Introduction to Computer Systems
- Spring 2015 - CSCI0180, Integrated Introduction to Computer Science

PROJECTS

MAPS | Full Stack
March - April 2015

- Implemented Google Maps like application from scratch with backend in Java and frontend as a web UI.
- Street/Node information stored in SQLite database, and is processes for nearest neighbor search with KDTrees, shortest path with modified A*, and autocorrect with bigram ranking.
- Backend exposes API to web interface, which sends Ajax requests to fetch information within a square area and draws it on a canvas.
- Users can click points on map and get highlighted shortest route with direction, or can manually enter street names.

CARD AUTHENTICATION API | Full Stack
February - May 2015

- Worked with 3 other members to create a replacement for the Brown Engineering Design Workshop card swiping and authentication system for different machines.
- API written in Java keeps track of user permissions and locations on where they swiped in from, has admin accounts that can add/delete users and monitor where users are logged in on web UI. Has analysis engine on top of database and can view graphs of historical activity.
- Designed with security in mind and employs 2048 bit RSA encryption on user login data.