

# Zili Xiang

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## EDUCATION

### CORNELL UNIVERSITY

**MPS IN INFORMATION SCIENCE**  
May 2017 | Ithaca, NY  
Cum. GPA: 3.60 / 4.0

### BS IN LANDSCAPE ARCHITECTURE

Jan. 2014 - May 2016 | Ithaca, NY  
Conc. in Computer Science  
College of Agriculture and Life  
Science  
Dean's List (2015 Fall)  
Cum. GPA: 3.50 / 4.0

### SHANGHAI JIAO TONG UNIVERSITY

Sep. 2011 - Dec. 2013  
Shanghai, China

## LINKS

Github:// [zx77](#)  
LinkedIn:// [zili-xiang](#)  
Kaggle:// [zx77](#)  
Website:// [zilixiang.me](#)

## RELEVANT

## COURSEWORK

Operating System  
Database System  
Machine Learning  
Computer Graphics + Prac  
Artificial Intelligence  
Natural Language Processing  
Data Structure  
Web Development (as TA)  
Discrete Structure

## RELEVANT SKILLS

Java • Hadoop MapReduce  
J2EE • Spring • Maven  
OpenGL (GLSL and WebGL)  
• C/C++ • PHP • CSS • HTML  
MySQL • MongoDB  
Python • Spark • word2vec  
Numpy • Scipy  
JavaScript • jQuery  
React • Redux • react-d3  
Node.js • Express • ej  
IBM Watson

## RELEVANT EXPERIENCE

### MINI TWITTER API Spring Boot, h2, Java EE, Groovy

June 2017 - July 2017 | Ithaca, NY  
• Implemented Spring Security to manage the access to different part of the API  
• Linked API to h2 database interface with named parameter JdbcTemplate

### IRRIGATION DECISION WEB APPLICATION React.js, Redux, Node.js

Jan. 2017 - May 2017 | Ithaca, NY  
• Developed a mobile irrigation decision assistant with React.js  
• Implemented Redux as state container to manage user profile  
• Consumed RESTful API to retrieve weather forecast data

### COMPUTER GRAPHICS + PRACTICUM OpenGL(GLSL, WebGL) and Java

Jan. 2017 - May 2017 | Ithaca, NY  
• Visualized historical development data of all countries with WebGL (it's now on [my personal website](#))  
• Reduced running time complexity of ray tracing from  $O(n^2)$  to  $O(n \log n)$  with KD tree data structure.  
• Implemented frame buffer and skybox for Maze Crawler animation rendering

### BREAKTHROUGH Node.js, JavaScript, Python, IBM Watson

April 2017 - April 2017 | Ithaca, NY  
• Implemented a chatbot web app with IBM Watson to help high school students with disability locate their career path  
• Designed and implemented a matching scoring algorithm

### MACHINE LEARNING PROJECTS Python, Spark, Numpy

July 2016 - May. 2017 | Ithaca, NY  
• Trained linear regression model from Million Song Database with Spark  
• Implemented random forest for CART tree and reduced testing error from 23% to 7%  
• Implemented k-mean algorithm using Hadoop framework on local machine

### AMBIGUITY PHRASE DETECTION (NLP) Python, NLTK, Numpy, word2vec

Aug. 2016 - Dec. 2016 | Ithaca, NY  
• Implemented HMM, CRF and deep learning based package to detect ambiguity phrase.  
• The best result reached 39% of accuracy and ranked top 10% in Kaggle competition.

### OPERATING SYSTEM PROJECTS C/C++, Python

Aug. 2016 - Dec. 2016 | Ithaca, NY  
• Built concurrent programs with mutex, semaphore and condition variables  
• Developed messaging network connection with C TCP socket interface

## ADDITIONAL EXPERIENCE

### TEACHING ASSISTANT | INTERMEDIATE WEB PROGRAMMING

Jan. 2017 - May 2017 | Ithaca, NY  
• Held weekly office hours helping with debugging JavaScript, PHP and SQL  
• Prepared weekly discussion and taught back-end technologies (SQL, PHP, phpMyAdmin, JavaScript, jQuery, Ajax and HTML)

### RESEARCH ASSISTANT | SOCIAL DYNAMICS LAB

July 2016 - Sep. 2017 | Ithaca, NY  
• Developed tools to monitor Twitter stream and built ngram model based on stream data with mongoDB  
• Implemented and optimized bidirectional BFS for social networks to find shortest paths between users in CPython  
• Implemented Yen's k shortest path algorithm to test the robustness of connections on social networks