

# Zili Xiang

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## EDUCATION

### CORNELL UNIVERSITY

MPS IN INFORMATION SCIENCE | Graduated in May 2017 | GPA: 3.6 | Ithaca, NY

BS IN LANDSCAPE ARCHITECTURE | Graduated in May 2016 | GPA: 3.5 | Ithaca, NY

### SHANGHAI JIAO TONG UNIVERSITY

MAJOR IN LANDSCAPE ARCHITECTURE Sep. 2011 - Dec. 2013 | Shanghai, China

## EXPERIENCE

### SOFTWARE ENGINEER | IBM SECURITY MAAS360

July. 2019 - Now | Blue Bell, PA

- Improved the performance and robustness from earlier product by adopting Netty framework
  - ◊ Better memory management with byte buffer and reference counting technique
  - ◊ Reduced network communication overhead and improved throughput by adopting event based asynchronous processing on network data
- Maintained a gateway to enable secure and reliable connection to enterprise resource on mobile device
- Designed and developed proxy client to connect to gateway via SOCK5
  - ◊ Realized validation against corporate authentication methods (LDAP or AD) before establishing connection with gateway over customized SOCKS5 initialization process
  - ◊ Implemented the mechanism utilizing asymmetric encryption to verify user identity
- Troubleshot production issues from customers and released patches to solve customer issues

### SOFTWARE ENGINEER | IBM CLOUD BILLING

Feb. 2018 - July. 2019 | Dallas, TX

- Maintained and optimized a billing batch system, which runs every day to generate invoice to bill customers
  - ◊ Created an audit tool to detect billing data anomalies and distribute heavy workload into sub-processes with zookeeper
  - ◊ Designed and implemented automatic error handling mechanism on the batch system
- Developed full stack on IBM Cloud IaaS infrastructure management system with PHP back-end and JavaScript front-end
  - ◊ Expanded capability of the system to support accounting personnel to gain visibility into the billing system and perform daily operations
  - ◊ Developed SOAP API to expand the capability of an MVC model based management system
  - ◊ Improved front end experience by implementing asynchronous requests with Ajax
  - ◊ Improved memory utilization on metric monitoring page (reducing memory consumption by 75%) by optimizing memory leaking code
  - ◊ Maintained business data with Oracle DB and managed DDL with a migration system

### 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)

## RELEVANT PROJECTS

### PRICE CRAWLER Java, Spring Boot, Docker

September 2019 - Now | Bluebell, PA

- Designed and developed a crawler to crawl price data for items on online shopping platforms
- Implemented app layer with Spring Boot, which provides RESTful APIs to access data in H2 database
- Built Dockerfile to run application instance in a Docker container

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

Jan. 2017 - May 2017 | Ithaca, NY

- Reduced running time complexity of ray tracing from  $O(n^2)$  to  $O(n \log n)$  by implementing KD tree algorithm
- WebGL related projects are up on [my website](#) as Water simulation and Maze Crawler

## RELEVANT SKILLS

Java • Spring Boot • Gradle • Netty • Python • OpenGL (GLSL and WebGL) • PHP • CSS • HTML • SQL • JavaScript • Test Driven Development • Docker • Kubernetes • Rust