

# Cheng Shi

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## EDUCATION

### Northeastern University – Khoury College of Computer Science

Boston, MA

*Master of Science, Computer Sciences - 4.0*

*Jan 2023 – Expect Dec 2024*

### City University of New York – Queens College

New York, NY

*Bachelor of Arts, Computer Science - 3.7*

*Sep 2017 – Dec 2022*

## EXPERIENCE

### Evergreen Investments

July 2022 – Sept 2022

*Software Develop Engineer Intern*

*Duluth, GA*

- Developed and implemented advance **Java** and **Deluge** scripts integrated with **Zoho CRM** in a cross-functional team. Optimized a wide range of automation processes, including data entry, system administration, and sales analysis.
- Normalized the entity-relationship model and refined the CRUD processes of the **SQL** database, managing over **20,000** leads, properties, and sales.
- Integrated automatic recommendation algorithms with **Java** that analyze existing property and customer data, generating potential sales models and suggestions for the management team through CRM APIs.

## PROJECTS

### GeekDock - Full Stack Web Application | *React, Node.js, Express, MongoDB, Bootstrap, Docker, GitHub Action*

- Developed a online Q&A website for geeks utilizing **axios** serving **RESTful API** with **React** and responsive page using **Bootstrap** along with HTML/CSS/JS as front-end
- Implemented a micro-services architecture server by **Express** and with **Node.js** and utilize mongoose for CRUD on **MongoDB**
- Employed CI/CD pipeline using **GitHub Action** and **Docker** which automatically deploy and run Unit, Component and E2E tests configured in **Jest** and **Cypress**
- Utilized **CodeQL** for threat modeling and security check to prevent potential malicious attacks.

### Digital Humanity - Web Application | *PHP, HTML/CSS, JavaScript, SQL, R*

- Developed online platform for text information retrieval and analysis to study human behavior
- Utilized **PHP** along with HTML5 and CSS to responsively generate pages as the front-end.
- Implemented crawler and data serialization strategy by **JavaScript** and PHP to process incoming website content and retrieve, filter out useful information for analyze as back-end
- Deployed automated data analysis solution using **R script** which posted weekly reports to the sites on human's behavior on languages.

### Filter Room - Image Processing Application | *Java, SwingGUI, JUnit*

- Lead the development of a **MVC** structured Full Stack **Java** app , integrating interfaces through Swing GUI
- Implemented features to read and export variant image file format, apply advanced visual effects with matrix algorithms by **Java**, enhancing the application's practical utility
- Employed Java **Threads Pool** with **Priority scheduling** algorithms to handle large number of concurrent batch processing requests up to **10 Images** simultaneously while been responsive.

### Pin Ball War - P2P Online Network Game | *C++, Socket, UDP/TCP*

- Designed a hybrid Multiplayer Game Architectures that is mixture of Client-Server and P2P model, utilizing **TCP/IP** and **NAT traversal** to establish a initial connection between users with a server host thread and **UDP** for real-time game data transport to minimize the latency.

## SKILLS

**Languages:** Java, C, C++, Python, JavaScript, HTML5, CSS, PHP, SQL, R, Deluge, LaTeX

**Test:** JUnit, Jest, Cypress, CodeQL, ESLint

**Web Development :** React, Node.js, Express, RESTful, Spring Boot/MVC, MyBatis, Bootstrap, Flask

**Database & Analyze :** MySQL, MongoDB, RStudio, NumPy, Matplotlib, Pandas, Beautiful Soup

**Tools :** Docker, GitHub, AWS

**Architecture Design :** MVC, REST, SOA, Microservices, Distributed System

**System:** Multithreading, Mutex Lock, POSIX API