# Mark Han

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#### **EDUCATION**

## Binghamton University, SUNY | Thomas J. Watson College of Engineering and Applied Science

Bachelor of Science in Computer Science

**May 2024** 

Cumulative GPA: 3.4 / 4.0

Honors: Upsilon Pi Epsilon Honor Society

**Relevant Coursework:** Programming & Hardware Fundamentals, Computer Architecture, Operating Systems, Automata Theory, Linear Algebra, Probability with Statistics, Object-Oriented Programming, Data Structures & Algorithms, Design & Analysis of Algorithms, High Performance Computing, Database Systems, Web Development

#### **TECHNICAL SKILLS**

Languages: Java, C, C++, JavaScript, Typescript, Python, Bash, X-86 Assembly

Software and OS: Git, Eclipse, Visual Studio Code, Docker, GitHub Actions, Oracle, MongoDB, AWS, Linux

Additional: HTML, CSS, Angular, React, Bootstrap, Express, Spring Boot, Hibernate, Maven, SQL, PL/SQL, NoSQL

#### PROJECT EXPERIENCE

E-commerce Website - Angular, Spring Boot, MySQL, AWS, Docker, GitHub Actions

- Designed a full-stack E-commerce website allowing customers to browse, checkout with Stripe, and track orders
- Constructed REST APIs with Spring Data REST, enabling seamless integration between Java backend and Angular client
- Established a CI/CD pipeline using GitHub Actions, integrating automated testing, Docker-based building, and seamless deployment to AWS
- Leveraged Spring Data JPA to design custom query operations, enabling pagination and searching
- Accomplished user authentication using Spring Security and JWT to allow customers to track order history and details

Employee Manager - Java, Spring Framework, MySQL, Hibernate, Bootstrap, Thymeleaf

- Developed a Spring MVC and Hibernate CRUD project allowing users to manage employee information
- Applied Hibernate to map POJOs to SQL entities and develop custom queries using the Hibernate Query Language
- Devised Spring MVC controllers to process web requests
- Leveraged Thymeleaf and Bootstrap to build a modern server-side view template
- Implemented Spring Security for user authentication, user registration, and custom roles

### **Music Social Network -** C++

- Collaborated with two peers on an application recommending songs based on a user's social connections
- Implemented a binary search tree and graph to store user information and friendships between users
- Designed a BFS graph algorithm to determine if a user is within another user's social network
- Constructed a max heap data structure to extract popular songs within a user's social network

#### Student Registration System – Java, Oracle PL/SQL

- Built a student registration system leveraging stored PL/SQL procedures executed using Java Database Connectivity
- Employed relational database tables to design complex queries based on several parameters
- Created a CLI using Java to execute procedures such as creating/enrolling students, checking prerequisites, and more

## EXTRACURRICULAR ACTIVITIES

## **CodePath Technical Prep Course**

- Improved technical problem-solving skills by completing twelve weeks of CodePath's online learning
- Engaged with a group of peers and a mentor to solve technical coding problems through peer programming

#### **Korean Community Services Summer School Teaching Assist**

• Tutored elementary and middle school students to help improve math and literacy skills