

# Goheung Choi

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Minneapolis | MN

## OVERVIEW

Highly driven software engineering graduate from the University of Minnesota with a Bachelor's degree in Computer Science. Strong interest in software architectures, algorithm efficiency, and program designs. Familiar with collaborative software development using Agile methodology, CI/CD, and Git. Seeking opportunities to leverage my diverse programming skill set to deliver innovative solutions that surpass expectations.

## SKILLS

**Front-end**(HTML, CSS, JavaScript, TypeScript, React), **Back-end**(NodeJS, Django), **Database**(PostgreSQL, SQLite, MySQL, XML), **Query Languages**(GraphQL, SQL), **Programming Languages**(C/C++, Java, Python), **Build Tools**(CMake, GNU Make), **Software Development**, **Software Design**, **Object-Oriented Programming**, **Testing**(Google Test, JUnit, Python Unit Test), **DevOps**, **Agile**, **Scrum**, **CI/CD**, **Git**, **Git Branching Models**, **Docker**, **Linux**, **Parallel Computing**(OpenMP, MPI, OpenCL, CUDA)

## REPRESENTATIVE PROJECTS

### **BUSINESS MANAGER** (Keywords: Full-stack, 2-Step Authentication, Django, GraphQL, REST, React, Apollo, PostgreSQL)

A comprehensive web application designed to organize business tasks by providing modules for client management

- Engineered a back-end service in Django with a custom user model for user authentication by employing GraphQL for efficient data querying and mutations, enhancing data retrieval speed and application performance
- Implemented complex CRUD operations for user management modules, providing a reinforced secure 2-step email authentication system and extensive data managing tools for business administrative needs
- Leveraged Apollo Client in a React-based front-end to facilitate GraphQL operations and state management function, which enriched user experience and data consistency

### **GRAPH GAME** (Keywords: Back-end, WebSocket, MVC Model, Algorithm, Unit Test, C++, React, Boost, Redux)

A web-based game application where users compete with an AI powered by complex server-side logic and algorithms

- Developed a C++ back-end program capable of managing WebSocket connectivity of the server and efficiently employing the MVC model for easier maintenance, testing, and expansion of the application
- Integrated Boost Library in C++ for efficient low-level I/O operations, WebSocket, and JSON parsing, enhancing performance and memory management of the server
- Implemented a React-based UI paired with Redux for state management, enabling real-time and interactive gameplay as well as robust data integrity

### **TOP 20 MOVIES** (Keywords: Front-end, API, ReactJS, Redux, HTML, CSS, JavaScript)

An interactive website showcasing the top 20 movies sourced from TMDB API with diverse visual effects

- Designed a dynamic user interface to realize a proper layout and design for improving user experience and organizing the information of each movie
- Programmed to handle API requests and rendering procedures in sequence to prevent collisions caused by delays in receiving API data
- Utilized Redux to store data from third-party API to enhance efficiency when redirected to other pages

## EXPERIENCE

### **TEACHING ASSISTANT** — University of Minnesota CS&E

August 2022– May 2023

- Developed advanced auto-graders in C programming language to automate the evaluation of student projects using the unit testing methodology for fair, efficient, and reliable assessment of students' code
- Provided interactive lectures to 20-30 students during lab sections to help deepen understanding of concepts of programming in the view of machine architecture and operating systems
- Collaborated with 2 other TAs to effectively deliver presentations and enhance students' learning by improving the quality of lab content

## EDUCATION

### **UNIVERSITY OF MINNESOTA—TWIN CITIES**

August 2019 - May 2023

Bachelor of Science in Computer Science (GPA: 3.79)

- Relevant Coursework:** Program Design Development, Introduction to Operating Systems, Advanced Programming Principles, Object Oriented Programming in C++ and Java, and Advanced Algorithms and Data structures

## CERTIFICATES

### **AWS CERTIFIED CLOUD PRACTITIONER** (2023)

Issued by Amazon Web Services Training and Certification

- Skills:** Amazon Web Services, Cloud Computing

## ACTIVITIES

### **SOCIAL CODING** — Member

September 2021 – January 2022

- Assisted club members with choosing the proper platforms and languages for a project
- Collaborated with 5 other students to build a website that introduces the club using HTML, CSS, and JavaScript