

Haohu Shen

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STRENGTHS

- **Open-minded:** Passionate about innovative solutions and keen to explore new technologies. Always eager to think outside the box and address challenges by adapting to new tech stacks.
- **Detail-oriented:** Exhibits patience during code reviews and debugging. Proficient in identifying performance bottlenecks and refining code. Enjoys delving into details by examining the source code.
- **Teamwork:** Committed to collaboration, consistently engaging in active communication and discussions. Values feedback from teammates and promptly identifies and addresses issues for resolution.

SKILLS SUMMARY

- **Languages and DB:** Java, Cpp, Go, Python, Bash/Zsh, MySQL, Redis, MongoDB, MinIO
- **Containers and Microservices:** Docker, K8s, Springcloud
- **Version Control and CI/CD:** Git, Gitlab CI
- **Algorithms:** Love solving algorithmic problems in [Kattis](#) and [Hackerrank](#)

UNDERGRADUATE COURSE PROJECTS

- **Student & Faculty Information Manager:** Spearheaded the development of a desktop-based CRUD application, facilitating student grade management and course registration through an intuitive form interface. Collaborated with the team to extract and simulate real course IDs from the University of Calgary for a realistic user experience. Technologies Used: JavaFX, Jsoup, Junit, SQLite (2019)
- **Hotel Online Booking System:** Coordinated the team on building an online booking system running on the web by the finalization of requirements, transaction flow, and technology selection. Tech: MyBatis, SpringMVC. (2020)
- **An Online Image Editor:** Led the team in developing a web-based booking platform, from requirements gathering to defining transaction workflows and technology stack selection. Tech: Node.js, MySQL, Digital Ocean (2020)

SIDE PROJECTS/TOY CODE

- **Caches:** Designed a caching system using Cpp with template specialization, featuring FILO, FIFO, LRU, and LFU eviction policies. Incorporated anti-hash collision techniques for enhanced performance. Tech: CMake, Catch2. (2020)
- **Rational:** Developed a custom arbitrary-precision fraction library leveraging Java's BigInteger functionality. Tech: Maven, JUnit. (2021)
- **K-Way Merger:** Implemented a high-performance sorting and merging algorithm in Golang to process billions of integers from files, leveraging a binary heap structure. Tech: Docker. (2022)
- **Food Ordering App:** Oversaw the entire development lifecycle of the project's back-end, including database design and maintenance, RESTful API development, API documentation, and the implementation and execution of unit tests. Tech: Springboot, Redis, MariaDB, Docker, Swagger, Postman. (2022 - 2023)
- **Dots Lock Cracker:** Developed a puzzle solver for the game 'Atomic Heart'. The solution process was abstracted as finding the shortest possible path in a directed graph. Leveraged Dijkstra's algorithm, top-down dynamic programming, backtracking, and graph theory principles. (2023)

EDUCATION

- **University of Victoria** Victoria, British Columbia, Canada
Master of Engineering in Telecommunications and Information Security - GPA: N/A *September 2023 - Now*
- **University of Calgary** Calgary, Alberta, Canada
Bachelor of Computer Science - GPA: 3.858/4.0 *July 2018 - February 2022*
Courses: Computing Machinery I and II, Principles of Operating Systems, Design and Analysis of Algorithms I, Programming Paradigms, Data Base Management Systems, Computer Networks, Introduction to Computer Graphics, Advanced Programming Techniques
- **Guilin University of Technology** Guilin, Guangxi, China
Bachelor of Engineering - GPA: 89.9/100 *July 2011 - June 2016*

AWARDS AND HONORS

- **International Collegiate Programming Contest**
Achieved silver medal in North America Rocky Mountain Regional Programming Contest *March 2021*
- **Dean's List Placement in UCalgary**
In the dean's list for the 2019-2020 academic year

EXTRACURRICULAR ACTIVITIES

- Competitive Programming Club - September 2018 - December 2021
- Alberta Collegiate Programming Contest (Division 1). Placed [4/37](#) in 2020 and [4/28](#) in 2021.
- Calgary Hacks 2020 (Hackathon) Drafted the project idea, database, participated in code review and demo: [link here](#)
- Contributed to the Open Source project [OI-Wiki](#) by [pulling multiple requests](#).
- Helped to correct a mistake in the documentation of [Huawei OpenGauss DB](#) by [creating an issue](#).