

Hui Li

✉ howarli@qq.com | ✉ huili@cuhk.edu.hk | 📞 +86 15502073125
🐙 github.com/howarle | 📁 gitee.com/howarli | 📖 blog.csdn.net/howarli

Education

South China University of Technology (SCUT)

B.Eng in Software Engineering | advisor: [Prof. Deyou Tang](#)

Sep. 2020 - Jul. 2024

Guangzhou

- GPA 3.74/4.0 (87.92/100.0), National Scholarship 2020 & 2021;
- Relevant Courses: Database, Operating Systems, Compiler, Algorithms and Data Structures;

The Chinese University of Hong Kong (CUHK), CSE

Research Assistant, Husky Data Lab | advisor: [James Cheng](#)

Sep. 2023 - Jun. 2024

Hong Kong

- Graph Systems, Machine Learning Systems

Contest Experience

2022-12	CCF Big Data and Computing Intelligence Contest (BDCI 2022)	Champion
2022-06	Huawei ICT Algorithm Diamond Contest	Champion
2022-12	ACM International Collegiate Programming Contest (ICPC2022) Nanjing Region	Gold Medal
2022-11	ACM International Collegiate Programming Contest (ICPC2022) Xi'an region	Gold Medal
2022-07	ACM International Collegiate Programming Contest (ICPC2021) Asia East Continent Final	Gold Medal
2022-04	ACM International Collegiate Programming Contest (ICPC2021) Macau Region	Gold Medal
2021-11	ACM International Collegiate Programming Contest (ICPC2021) Jinan Region	Gold Medal
2021-04	ACM International Collegiate Programming Contest (ICPC2020) Asia East Continent Final	Silver Medal
2021-04	ACM International Collegiate Programming Contest (ICPC2020) Kunming Region	Gold Medal
2020-12	ACM International Collegiate Programming Contest (ICPC2020) Jinan Region	Gold Medal
2022-07	China Collegiate Programming Contest (CCPC2021) Final	Silver Medal
2021-11	China Collegiate Programming Contest (CCPC2021) Haerbin Region	Gold Medal
2021-11	China Collegiate Programming Contest (CCPC2021) Weihai Region	Silver Medal
2020-10	China Collegiate Programming Contest (CCPC2020) Weihai Region	Gold Medal
2021-06	GuangDong Province Collegiate Programming Contest (GDCPC2021)	Second Place
2019-07	National Olympiad in Informatics (NOI2019) Final	Bronze Medal
2019-06	International Olympiad in Informatics, China Team Selection Competition (CTCS2019)	Bronze Medal
2018-07	Tsinghua University independent enrollment, Admission	

Internship

Huawei Technologies

Software Algorithm Engineer

Dongguan, Dec. 2022 - Jan. 2023

C++ STL, Algorithm Optimize

Optimize performance in the reset scenario and minimize overall computational workload through the following steps:

- Identify and analyze bottlenecks;
- Refactored and optimized bottleneck modules;
- Compilation-time conflict detection for lockless Data Center;

Note that our code frequently employs C++ standard containers, particularly `std::map`, which have lengthy initialization process when reset. To address this issue, I conducted several experiments:

- Build a performance benchmark framework for specific containers and scenarios;
- Implement a non-intrusive initialization optimization based on the source code of `std::map`;

In addition, I had the opportunity to share my knowledge and expertise of data structure algorithms with various departments thanks to an invitation extended by the leader.

JQ Investments

Development Intern

Shanghai, Jun. 2023 - Sep. 2023

C++, Quantitative Trading

Training in quantitative trading domain knowledge and work independently on C++ projects, including:

- Quant Research/Market Study;
- TCP C/S Framework;
- In-memory/Disk KV Storage;
- Backtesting System;

Backtesting System including following modules/functions:

- Order Book Reconstruction: Reproduction trading aggregation module of SZE/SSE;
- Market Data Loader: Pull data from remote storage and decode, with local disk/memory Cache;
- Algorithm: user-defined strategies;
- Latency Simulation: simulate network/compute latency between modules;

Projects

CCF BDCI 2022 Multi-task Recognition Based on Wenxin CV Foundation Models

Sep. 2022 - Jan. 2023

Contest Project

Python, TensorFlow, Data Mining, CNN, Neural Architecture Search

Our objective is to anticipate the comparative performance of subnetworks based on their structures, which is a subproblem of Neural Architecture Search.

- As the team leader, conducting preliminary research, analyzing baselines, and assigning tasks.
- Establish the framework to streamline development and experimentation processes.
- Implemented an automated testing system to simplify model selection and parameter optimization.
- Present and defend our final method.

During the competition, we introduced an innovative fusion of traditional algorithms with machine learning models, which proved a significant advantage for our team, propelling us to first place on leaderboards A and B.

Chameleon

Jan. 2022 - Apr. 2022

Huawei openGauss-MySQL online migration tool

JAVA, Python, SQL, openGauss, PostgreSQL, MySQL

Chameleon, a migration tool from MySQL to openGauss. The objects to be migrated include tables, views, user-defined functions, user-defined procedures, and triggers. The SQL of MySQL is not fully compatible with the PL/pgSQL supported by openGauss, necessitating the involvement of SQL translation. To address this, a compiler front end was implemented to transform MySQL statements into AST and generate PL/pgSQL.

- Conducting SQL difference analysis between MySQL and openGauss;
- Translator design and implementation;
- Manage development progress;

Huawei openGauss-MySQL time function compatibility project

Oct. 2021 - Jun. 2022

School-Enterprise Cooperation Project

C/C++, SQL, openGauss, MySQL

Develop a plugin to make openGauss compatible with the time data types and time processing functions of MySQL;

- Design compatibility solution, delimitate the boundary;
- Design and implementation the time type year/year2, and some time functions;
- Establish an automated testing to improve efficiency;

This project was also selected as database course practice by the tutor, so I also participated as a teaching assistant.

Honor and Scholarship

2021-10	National Scholarship
2022-10	National Scholarship
2021-11	SCUT Pacemaker to Merit Student, Nomination Award
2021-10	Excellent Student Cadre
2021-10	SCUT Hongchangpingqing Foundation Scholarship
2022-10	SCUT Hongchangpingqing Foundation Scholarship
2022-11	SCUT-Tencent Scholarship
2022-11	SCUT-Huawei Scholarship
2023-01	Huawei Euler&Gauss Open Source Contribution Scholarship

Skills

Programming Skills:	C/C++ , Python, Java, \LaTeX .
Algorithm Ability:	Codeforces Rating: 2432
Language Skill:	IELTS: 6.5

Service

SCUT ACM Training Team

May. 2022 - Sep. 2023

vice-captain

- Organize personnel and arrange the tournament;
- Management and operate the training team;

SCUT SE Volunteer Service Team Computer Clinic

Sep. 2021 - Sep. 2022

president

- Conducted freshman interview and orientation;
- Managing the operation of the clinic and coordinating with others departments;

GDCCF Youth Programming Ability Improvement Summer Camp

Jul. 2021 - Aug. 2021

Instructor

- Course planning and arrangement;
- Course teaching, topic explanation, and comment;