

Zecheng QIU

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EDUCATION

Macau University of Science and Technology (M.U.S.T.)

Macao S.A.R.

BSc. in Computer Science

Sep. 2023-Present

- CGPA:3.73 / 4.00 (about top 5%) 3.85 at academic year 2024-2025 (about top 3%)
- Selected Grade: Object-Oriented Programming (A+), Web Technologies (A+), Digital Logic (A+), Physics (A+), Probabilities and Statistics (A+), Data Structures (A), Calculus III (A-), Computer Organization (A-)
- Expected Date of Completion: August 2027

INTERNSHIP

CoCreative Information Technology (Shenyang) Co., Ltd

Shenyang, Liaoning Province, P.R.China

Java Software Engineer

Jun. 1-Aug. 30, 2025

- Developed and maintained software functions using Java and JavaWeb technologies.
- Performed SQL query optimization and project performance optimization.
- Wrote code and contributed to the development of company software projects.

RESEARCH EXPERIENCE

PF CFD Team

M.U.S.T, Macao S.A.R.

Researcher

Feb. 2024-Present

- Developed a hybrid numerical method for simulating three-dimensional fluid vesicle dynamics using C and C++, focusing on phase-field modeling in biological systems.
- Optimized data storage strategies in local memory to improve computational efficiency and integrated MATLAB for accurate mathematical modeling and analysis.
- Engineered a multi-vesicle simulation framework based on single-vesicle dynamics, incorporating inter-vesicle surface tension effects from phospholipid interactions.
- Introduced and iteratively refined a custom influence coefficient to model vesicle interactions, aiming to identify a universal value within fixed computational domains.

- Investigated dialogue-based Text-to-Visualization techniques for AI-driven database systems by synthesizing methods from Text-to-TrajVis and text-to-SQL.
- Designed algorithms to convert multi-turn natural language queries into precise visualization instructions using PostgreSQL & PostGIS.
- Leveraged large language models (LLMs) to resolve linguistic ambiguities and generate accurate visual outputs, enhancing interaction with trajectory data.

AWARDS & HONORS

2024-2025 Dean's Honor List of Faculty of Innovation Engineering

M.U.S.T, Macao S.A.R.

Awarded for achieving a cumulative GPA 3.70 or above in the corresponding academic year.

Entrance Scholarships (Outstanding)

M.U.S.T, Macao S.A.R.

Awarded for top ~7% | Awarded in 2023, renewed in 2024 & 2025. Expected annual renewal through 2026.

EXTRA-CURRICULAR COURSES

The University of Hong Kong Summer Institute

Hong Kong S.A.R.

AI Engineer: Gen-AI and Virtual Worlds

Jul. 8-18, 2024

- AI Potential and Tools for development.
- Development of AI Model.
- Practical case studies for AI technologies.
- 3D World and Creation.

SKILLS

Languages:

- Mandarin (Native Proficiency): National Putonghua Proficiency Test 2-A
- English (Full Professional Proficiency): IELTS (7.0), CET-4 (598)

IT Skills:

- Coding Language: C, C++, Python, SQL, Markdown, LaTeX, HTML, JavaScript, CSS, RISC-V Assembly
- Technologies: Visual Studio Code, MATLAB, Makefile, PyCharm, Microsoft Office, WPS

MEMBERSHIP

Institute of Electrical and Electronics Engineers (IEEE): Student Member

Dec. 2024-Present

China Society of Image and Graphics: Student Member

May 2024-Present