Qiucheng Chen

Email Personal Homepage GitHub

EDUCATION

Tianjin University, China

Bachelor of Computer Science and Technology Aug 2022 – Expected Jul 2026

- **Relevant Coursework:**
  - Probability Theory and Statistics (*100/100*);
  - Linear Algebra (94/100);
  - Advanced Mathematics (*90/100)*;
  - C++ Programming Principles (*96/100*);
  - Computer System Practice (*94/100*);
  - Computer Networks Practice (*98/100*);
  - Disposable Mathematics B (*91/100*);
  - Parallel Computing (*92/100*);
  - Fundamentals of Natural Language Processing (*99/100)*;
  - Neural Networks and Deep Learning *(92/100)*;
  - Computer Organization and Architecture (*95/100*);
  - Physics B (*91/100*);
- **Honor and Award:**
  - Academic Achievement Scholarship, 2024 (awarded to the top 0.7% of students)
  - Outstanding Individual for Academic Progress and Advancement, 2024
  - Outstanding student leader, 2024
  - Merit Student scholarship, 2023 (awarded to the top 10% of students)
  - Outstanding Student of Sunshine Sports Initiative, 2023 (awarded to the top 1% of students)
  - Liu Bao Scholarship, 2022 (awarded to the top-scoring student in the National Entrance Exam from each province, representing the top 0.6% of students)

PUBLICATIONS

2025

- **Qiucheng Chen**, Bo Wang. “Valuable Hallucinations: Realizable Non-Realistic Propositions”, submitted to ACL 2025

EXPERIENCE

College of Intelligence and Computing, Tianjin University

- LMc (Language and Mind computing) Lab with Dr. Bo Wang Apr 2024 - Expected Jul 2026
  - First-authored a paper titled "Valuable Hallucinations: Realizable Non-Realistic Propositions" and submitted it to ACL 2025.
  - Introduced the concept of "valuable hallucinations" in LLMs, providing the first formal definition and systematic analysis of hallucination value.
  - Explored how hallucinations, traditionally seen as detrimental, can be controlled and optimized for creative and problem-solving purposes.
  - Demonstrated how ReAct prompting helps to reduce non-valuable hallucinations while increasing the proportion of valuable hallucinations.
  - Contributed to the advancement of AI-generated content by proposing a method for

utilizing hallucinations for creative and exploratory applications rather than attempting to eliminate them entirely.
    - Conducting two key experiments in a human-computer interaction (HCI) project: analyzing decision-making through the Prisoner's Dilemma with LLM and human participants, and assessing loneliness to find alleviation strategies
- Data Driving Failure Diagnosis Project, with Dr. Yu Wang, funded by City of Tianjin
  Apr 2024 - Expected May 2025
    - Co-authored an article titled "Foundation Models for Prognostics and Health Management in Industrial Cyber-Physical Systems: A survey and roadmap", awaiting submission
    - Developed a graph network model for multi-sensor correlation learning in gas turbine systems to extract key fault features and improve detection accuracy
    - Applied causal inference methods to improve the clarity and the interpretability of the fault diagnosis model

- Tianjin Key Laboratory of Machine Learning with Dr. Ruonan Liu Aug 2023 – Apr 2024
    - Enhanced data analysis and integration with graph networks and causal inference to improve predictive maintenance and fault diagnosis for deep-sea devices, including drilling rigs and underwater robots
    - Performed comprehensive research and code reproduction on graph networks; work is accessible at GitHub

LEADERSHIP & INVOLVEMENT

Double Innovation Center, Faculty of Intelligence and Computing, Tianjin University
Director of Science and Technology Association Aug 2023 – Sep 2024

- Organizing lectures and discussions on recent computer science advancements, and creating bi-weekly WeChat updates to share research developments with a broader audience
- Supporting freshmen by offering personalized learning strategies and clarifying challenging concepts from their courses, helping them navigate their academic journey

Class Peer Support Leader Sep 2023 – present

- Helping fellow students reduce stress by conducting surveys, discussing personal issues, and providing psychological support

Computer Science and Math Tutor Feb 2020 – present

- Have dedicated over 534 hours to volunteering, tutoring elementary school girls in math and basic computer skills, etc.
- Recognized as a "Star Volunteer" by the China Volunteer Service Network (CVSN) for impactful community contributions

SKILLS & INTERESTS

IT Skills: C/C++, Python, PyTorch, Java, System Verilog, HTML, JavaScript, CSS, SPSS, SQL, LaTex
Research Interests: Large Language Models, Hallucination in LLMs, Machine Learning, Graph Neural Network
Language: English (IELTS 7.5), Chinese (Mandarin)
Interests: Swimming, Basketball, Badminton, Piano, Guitar, Zither, Painting