

Wen Cheng

chengwencs@gmail.com | www.wcheng.site | Last update: 2025/04

EDUCATION

University of Washington

Ph.D. in Computer Science and Engineering
Temporary Advisor: Shyam Gollakota

(Incoming) 2025.9 -

Nanjing University

M.Eng. in Computer Science (*Admission with Exam Exemption*)
Advisor: Wei Wang

2022.9-2025.7

Hefei University of Technology

B.Eng. in Computer Science and Technology

2018.9-2022.7

WORKING EXPERIENCE

Microsoft Research Asia

Research Intern in Wireless Group
Mentor: Jie Xiong

2024.8-2024.11

ByteDance

Software Engineer Intern

2022.1-2022.5

PUBLICATIONS

- Security Attack on LLM-based Code Completion Tools
Wen Cheng, Ke Sun, Xinyu Zhang, Wei Wang
AAAI (Oral), Feb.2025, PDF, Code
- USee: Ultrasound-based Device-free Eye Movement Sensing
Wen Cheng, Mingzhi Pang, Haoran Wan, Shichen Dong, Dongxu Liu, Wei Wang
IEEE SECON (Best Paper Award), Dec.2024, PDF
- DEWS: A Distributed Measurement Scheme for Efficient Wireless Sensing
Mingzhi Pang, Kaiying Li, Xun Wang, Wei Wang, **Wen Cheng**, Dongxu Liu, Yuqing Yin, Pengpeng Chen
ACM IMWUT, Nov.2024, PDF
- QAQ: Quality Adaptive Quantization for LLM KV Cache
Shichen Dong, **Wen Cheng (co-first)**, Jiayu Qin, Wei Wang
arXiv, PDF, Code
- W2KPE: Keyphrase Extraction with Word-Word Relation
Wen Cheng, Shichen Dong, Wei Wang
IEEE ICASSP, June.2023, PDF

PROJECTS

Security Attacks on LLM-based Code Completion Tools

Mar.2024 – Aug.2024

- Project lead, involved in the full pipeline from ideation and implementation to paper writing.
- Conduct the first comprehensive security audit of emerging LLM-based code completion tools, designing a standardized workflow and revealing critical vulnerabilities.
- Provide insights into the underlying causes of these security issues and discuss potential defense mechanisms.
- This work was accepted at **AAAI 2025 (Oral)**, released as an open-source project and presented onsite.

Quantization of LLM KV Cache

Jan.2024 – June.2024

- Co-led the project; contribute to idea development and implemented part of the codebase.
- Propose one of the core insights and participate in the derivation and formulation of the quantization algorithm.
- Outline the key logical structure of the work and take primary responsibility for writing the paper.
- The work has been cited over 40 times to date.

Pressure Sensing Using IMU and Magnetometer Fusion

Jan.2025 – Ongoing

- Co-led the project; design and validate sensor fusion algorithms integrating IMU and magnetometer data for pressure sensing.

- Conduct extensive literature review and contribute to the writing of a related research paper.

Device-free Eye Movement Sensing via Ultrasound

Oct.2022 – Nov.2023

- Lead the project and participate in the entire research process.
- First to observe that eye movement significantly influences ultrasound signals, which led to the design of a dedicated signal processing pipeline.
- Reveal the relationship between decomposition residuals and subtle eye movements, introducing a novel method for fine-grained motion sensing.
- This work was accepted at IEEE SECON 2024 and awarded the sole **Best Paper Award**.

Keyphrase Extraction Using Word-Word Relations

Jan.2023 – June.2023

- Project lead, developing a novel keyphrase extraction method leveraging word-word relationships to enhance precision.
- Introducing sentence fusion, keyphrase encoding, and a joint loss function to improve extraction robustness.
- Achieved first place in the ICASSP 2023 MUG Challenge with this approach.
- This work was accepted by ICASSP 2023 and presented onsite.

SELECTED HONORS

- Outstanding Master Dissertation of the School of Computer, Nanjing University (**Top 5**) – 2025
- Graduation with Honor: Excellent Master Graduate of Nanjing University – 2025
- IEEE SECON Best Paper Award – 2024
- Graduate China National Award (**Top 1%**) – 2024
- Nanjing University Distinguished Graduate Student – 2023, 2024
- Graduation with Honor: Excellent College Graduate of Anhui Province – 2022
- Undergraduate President Award (**Top 30 of 8000**) – 2022
- Undergraduate China National Award (**Top 1%**) – 2020, 2021
- Provincial Second Prize, China Collegiate Programming Contest (CCPC) – 2020, 2021
- Meritorious Winner, MCM/ICM – 2020

TEACHING EXPERIENCE

- Computer Architecture
Teaching Assistant, Nanjing University

2023/2025 Spring