

# Tianqi Xu

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## EDUCATION

### Sichuan University (Project 985)

Bachelor of Science in Software Engineering

- **GPA:** 3.77 / 4.0; **Weighted Average:** 89.32 / 100
- **Advisor:** Tao He

Chengdu, China

Sep. 2023 – June 2027 (Expected)

## RESEARCH EXPERIENCE

### Sichuan University

Sep. 2024 – July 2025

Chengdu, China

Research Assistant; Advisor: Tao He

- Proposed CNM-UNet, a medical image segmentation model that replaces vanilla hierarchical decoders with a single Continuous Neural Memory ODEs Block to minimize computational complexity.
- Leveraged Neural Memory ODEs for continuous temporal feature extraction, enabling precise data distribution modeling and enhanced accuracy.
- Designed a Dual Self-updating strategy based on test-time adaptation principles to enhance cross-domain generalization.
- **First author paper presented in AAAI 2026.**

### Sichuan University

Aug. 2025 – Feb. 2026

Chengdu, China

Research Assistant; Advisor: Tao He

- Proposed SACTTA, a Continual Test-Time Adaptation method to mitigate domain shifts in medical image segmentation.
- Designed an attention-driven dynamic layer selection mechanism that treats layer outputs as information tokens to adaptively select discriminative layers and enhance inter-layer interaction.
- Introduced a self-distilled adaptive learning rate with dual constraints (sensitivity & consistency) to accelerate adaptation and suppress error accumulation.
- **Co-first author paper submitted to ICML 2026.**

## RESEARCH INTERESTS

**Target Directions:** Embodied AI, World Models.

**Current Focus:** Test-Time Adaptation, Ordinary Differential Equation, Continual Learning.

## PUBLICATION

**Tianqi Xu**, Yashi Zhu, Quansong He, Yue Cao, Kaishen Wang, Zhang Yi, Tao He. CNM-UNet: Continuous Ordinary Differential Equations for Medical Image Segmentation, **AAAI 2026**. (Paper & Code)

## HONORS AND AWARDS

- **Merit Student Award (Consecutive 2 Years)**, Sichuan University 2023 – 2025
- Second-class Comprehensive Academic Scholarship (**Top 6%**), Sichuan University 2023 – 2024
- Third-class Comprehensive Academic Scholarship (**Top 15%**), Sichuan University 2024 – 2025

## SKILLS

**Frameworks:** PyTorch, torchvision, Hugging Face Transformers

**Programming:** Python, C/C++, JAVA, SQL, Git

**Languages:** English (CET-4: 585, CET-6: 560)