

# Jialin Zhang

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## Education

Tongji University, Computer Science, GPA: 89.29/100, Rank:94/298 2023-Present

**Relevant courses:** CPP, AI introduction, Database System, Computer Organization, Computer Vision, Digital Logic, Algorithm, Economics, Data Structures, etc.

## Project Experience

### *Research in Machine Learning, Deep Learning and Diffusion model*

- AI: Applications of ML and DL. -Taught by Björn Schuller (IC) 2024.09-2024.11
  - Learn the basic principles of DL and ML, Grade: 86/100
- AI and ML, HKU Summer School. -Advised by Yi Ma (HKU) 2024.07-2024.08
  - Creation and Basic Application of Diffusion Models. -Details: GitHub Link

### *Research in LLMs, KGE(Knowledge Graph Embedding)*

- Salary Management System Based on LLM and KGE 2024.11-Present
  - Build job network based on Neo4j, Use KGE models to find potential relations
- Headphone Swipe Gestures Empower Summarization (2<sup>nd</sup> Author)2025.06-2025.09
  - Submitted to CHI, under review.
  - Designed a cross-device swipe gesture system for LLM-based summarization and navigation of long voice messages, improving speed and reducing cognitive load.

### *Research in Computer Vision (CV)*

- Segment Anything Model(SAM) fine-tune in Medical Imaging. 2025.05
- Stable Diffusion + ControlNet fine-tune in Chinese Ink Wash Painting. 2025.05
- Underwater image enhancement. (2024APMCM, Third Price) 2024.11
- Suspended Sediment Concentration in Yangtze Estuary. 2024.02-2025.02
  - Built models for image preprocessing tasks.
- Automated Bridge Health Monitoring Using Infrared Technology 2023.09-2024.01
- Fully Convolutional Network(FCN) to classify infrared images.
- Tooth root canal orifice detection 2024.10-2024.11
  - CNN for image classification. U-Net for image segmentation.

### *Additional Training*

- Entertainment Industry Introduction. Taught by Mark Young (USC) 2024.02-2024.06
  - Learned the operational mechanisms of the film industry. Grade: Passed (P/F)
- Build and maintain a mental-health website. 2024.10-2024.12
  - Locally deploy website using the PyCharm+Django+MySQL framework.

## Honors

Tongji University Freshman Scholarship	2023
Tongji University Outstanding Undergraduate Scholarship	2024
Social Activity Scholarship of Tongji University for the Academic	2023-2024
Honorable Mention, 2025 MCM	2025
Third Prize, 2024 APMCM	2024
Academic Year Outstanding Mental Health Counselor at Tongji U	2023-2024

## Others

Tongji U Chess Club - Head of the Chess Department	2024.06 - Present
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