



# Qingshan Hou

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## Education

Tongji University

Sep.2022 – Jun.2026

Computer Science and Technology Undergraduate

Shanghai, China

- GPA: 4.44/5.0 | 89.42/100 | 3.88/4.0( Evaluated by World Education Services WES )
  - Coursework: Linear Algebra · Assembly Language Programming · Software Engineering · Artificial Intelligence · Data Structures · Algorithms · Object-Oriented Programming · Operating Systems · Principles of Computer Organization · Computer Networks
  - Class Monitor: Class of 2022, Computer Science and Technology 2nd Cohort

National University of Singapore

Aug.2025 – Dec.2025

Dept of Computer Science Exchange Student

## Singapore

Doing course work(CS4218 Software Testing) and AI for Science research in Blue Whale Lab

# Internship

Heywhale Technology Co., Ltd.

Jul 2025 – Sep 2025

## Research Intern

Shanghai, China

- Completed the “Large Model + X” Camp, covering Python, ML/DL, and NLP fundamentals.
  - Conducted applied research in LoRA fine-tuning, RAG pipelines, and model deployment.
  - Gained hands-on experience in end-to-end model optimization, evaluation, and deployment.

Hundsun Technologies Inc.

Jul 2024 – Aug 2024

FinTech Intern

Hangzhou, China

- Led a team of 6 members as product manager to design and develop a conceptual fund trading system.
  - Gained hands-on experience in financial technology, including subscription, redemption, and clearing processes, as well as full-stack development using Vue.js for the front-end, Spring Boot for the back-end, and MySQL for database management.
  - Certified Junior FinTech Engineer and recognized with the "Best Quality Award" for leading the development of the fund trading system.

## Research Experience

Cross-View Visual Place Recognition with AlphaEarth

Oct.2025 – Present

Computer Vision Cross-View Geo-Localization

Tongji University

- Building a cross-view place recognition framework leveraging DeepMind’s AlphaEarth 10m multimodal satellite embeddings.
  - Designing a decoder for retrieval directly in AlphaEarth’s feature space under large viewpoint and appearance shifts.
  - Developing an alignment encoder mapping ground imagery into the AlphaEarth latent space for cross-view matching.
  - Evaluating robustness across global regions to support large-scale geo-localization and multi-view mapping.

**Research Assistant: Multi-Agent Spatio-temporal Coordination**      Feb.2025 –  
Jul.2025

Embodied AI Multi-Agent Systems Tongji University

- Studied multi-agent spatiotemporal coordination for embodied intelligence, focusing on collaborative perception and task/motion planning.
  - Investigated communication and policy learning strategies enabling robust cooperative perception and prediction.
  - Enhanced agent generalization across diverse real-world scenarios, including domestic environments and autonomous driving.

## 🔧 Project Experience

BiLSTM-CRF Chinese Word Segmentation System  Feb.2025 – Dec.2025

Deep Learning Word Segmentation Tongji University

- Implemented a Chinese word segmentation system based on a BiLSTM-CRF architecture with multi-source embeddings.
  - Trained and evaluated on MSRA, PKU and Souhu corpora, achieving an F1 score of 0.91+ on the MSRA test set.
  - Implemented a custom CRF layer with BMES illegal-transition constraints, training utilities including early stopping, LR scheduler, gradient clipping, and evaluation pipeline.

ExCourt - Badminton Court Exchange System  Aug.2024 – Jun.2025

Software Engineering Mini App Tongji University

- Designed and developed a WeChat Mini Program to facilitate court exchange and team formation for badminton players.
  - Implemented key features such as team formation requests, court exchanging, and a chat module for user interaction.
  - Improved convenience for school badminton players and enhanced their overall experience.

Intelligent Car Based Online Calibration System Apr.2024 – Jun.2024

Computer Vision Internet of Vehicles Tongji University

- Developed an online calibration system using an intelligent car, replacing traditional static object-based calibration. This improved efficiency and reduced labor requirements.
- Utilized YOLO v9 for computer vision-based calibration and built a basic model of the intelligent car for autonomous movement and calibration.
- Enhanced calibration efficiency by automating the process with a self-moving car and reduced manual intervention and improved system accuracy.
- Won the Silver Medal at the 2024 China International College Students Innovation Competition (Tongji University Internal Competition).

## 🏆 Honors and Awards

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- Tongji University Undergraduate Excellence Scholarship [🔗](#) Nov.2023
- Certified Junior FinTech Engineer, Hundsun Technologies Inc. [🔗](#) Aug.2024
- Excellence Award: 2025 Corpus & Data Intelligence Creative Competition (Embodied Intelligence Track) [🔗](#) Jul.2025
- First Prize: 35th Shanghai Youth Science&Technology Innovation Competition [🔗](#) Apr.2020
- « Large Model + X General Education Summer Camp » Artificial Intelligence and Large Model Development [🔗](#) Sep.2021
- Silver Award: 2024 China International College Students Innovation Competition (Tongji University Internal Competition) [🔗](#) Jun.2024
- President,Jiading Campus Basketball Association Jun.2024 - Jun.2025

## ⚙️ Skills

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- Programming Language: C++ Python JavaScript
- English Proficiency
  - IELTS: Overall band 7.5 ( all sections are equal or above 7.0 )
  - GRE: Verbal 157 Quantitative 170 Writing 4.0

## ℹ️ Others

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- Activities:
  - UFI Filters Group/Sofima Automotive Filter Asia-Pacific Headquarters Plant Tour [🔗](#)
  - Performing a cappella at the Earth Hour event. [🔗](#)
  - Mercedes-Benz 2025 Shanghai International Auto Show Youth Talent Day [🔗](#)
- Interests:
  - Certified National Level-3 Basketball Referee
  - Music band lead singer [🔗](#)
  - A cappella Tenor