



# Yun Hong

COMPUTER SCIENCE · FUDAN UNIVERSITY

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“So we beat on, boats against the current.”

## Education

### FDU(Fudan University)

B.S.CANDIDATE IN COMPUTER SCIENCE

Shanghai, China

Sep. 2023 - PRESENT

### UTA(University of Texas at Austin)

EXCHANGE STUDENT IN COMPUTER SCIENCE

Austin, Texas

Aug. 2025 - Dec. 2025

Completed research on risk maps for autonomous driving at MagicLab, Fudan University, under the guidance of Wenchao Ding. The work has been submitted to IEEE Robotics and Automation Letters (RAL) for publication.

## Skills

<b>Machine Learning</b>	Finished all the lectures and labs of ML2022 by Hung-yi Lee
<b>Deep Learning</b>	Including CNN, RNN, LSTM, Transformer, GAN, Diffusion Model, and have a good command of PyTorch
<b>Data Structure</b>	Finished Data Structure (Honor) by Weiwei Sun, Fudan University and have a good command of data structure & algorithm
<b>Programming</b>	C, C++, Python, Java, LaTeX
<b>AI-Drive</b>	Autonomous Driving: planning, prediction and decision making
<b>Languages</b>	Chinese, English

## Experience

### Research on ChatGPT-o1 model reproduction and reflection ability improvement

RESEARCH ASSISTANT

Shanghai, China

Sep. 2024 - Jun. 2025

- Under the guidance of Professor Xuanjing Huang from Fudan University Natural Language Processing Group.
- By constructing, evaluating, and optimizing reflection datasets, we study how to introduce self-inspection and correction mechanisms into model reasoning to improve the performance of models in complex tasks.
- Responsible for the synthesis and training of self-critic data. Based on Llama3.1-8b-instruct, generate "reflection" answers from wrong to right, and use different strategies to generate diverse data of the reflection process, such as constructing complex reflection paths based on tree search reasoning, and verifying premises from conclusions through reverse reasoning. Use gsm8k test set to evaluate the performance of different methods.

### Learning RiskMap for Autonomous Driving in Partially Observable Environments

STATUS: PREPRINT; FOCUSED ON GAINING RESEARCH EXPERIENCE AND TRAINING.

Shanghai, China

Oct. 2024 - May. 2025

- Engineered risk field representations using advanced spatiotemporal modeling techniques.
- Developed and implemented realistic traffic scene generation leveraging diffusion models combined with gradient optimization.
- Designed and actualized a lightweight neural network for efficient risk prediction.

## Extracurricular Activity

### A Long-term Maintained and Updated Project of Map Navigation

INDEPENDENT DEVELOPER

Shanghai, China

Dec.5, 2024 - PRESENT

- This project combines OpenStreetMap data with Gaode Maps API to provide accurate routing and location search capabilities.
- Implemented various extended features including hybrid point selection (manual map clicks or location search), detailed route information display and support for different road types (motorway, trunk, etc.) with speed limit considerations.
- Completed by myself independently and will be updated for a long time.
- The complete codebase for this project is available at <https://github.com/16yunH/MapNavigation>.

NeuralStyle: A Modular Neural Style Transfer Project

Shanghai, China

INDEPENDENT DEVELOPER

Jun. 2025 - PRESENT

- Developed a neural style transfer toolkit in Python with clear modular separation for maintainability and extensibility.
- Implemented batch processing enabling automated multi-image / multi-style workflows.
- Designed a configurable pipeline centralizing hyperparameters (e.g., image size, optimization steps, style/content weighting) to streamline experimentation.
- Built an interactive web interface allowing users to upload content and style images and generate stylized outputs directly in the browser.
- Provided runnable entry points and a reproducible dependency specification.
- Maintained version history via CHANGELOG\_v1.1.0.md to document iterative improvements.
- Open-sourced at <https://github.com/16yunH/NeuralStyle> (continuous updates; repository created and first major push in Jun. 2025).

China Undergraduate Mathematical Contest in Modeling, 2024(CUMCM)

Shanghai, China

CORE MEMBER

Sep.5, 2024 - Sep.8, 2024

- Gained expertise in mathematical modeling, especially targeted data analysis and Python skills.
- Wrote some Python programs to analyze the data, make tables, etc.
- Wrote part of the paper and provided suggestions for revisions to problematic parts of the paper.

Fudan University’s team of aid education in Yudu, Jiangxi

Yudu, Jiangxi, China

CORE MEMBER

Jan.28, 2024 - Feb.2, 2024

- Deepened understanding of C programming language.
- Taught basic C programming language to local junior high school students.
- Established long-term relationships with local students and provided learning assistance.

Fudan Piano Association

Shanghai, China

MEMBER

Oct. 2023 - PRESENT

- Gained expertise in piano playing including works of Chopin, Beethoven, and Mozart.
- Played the piano at the annual party of Fudan Piano Association.
- Participated in the Shanghai International Import Expo, especially in the area of piano.

Fudan Musicians Alliance

Shanghai, China

KEYBOARD PLAYER

Sep. 2024 - PRESENT

- Playing the keyboard in the band.
- Participated and performed songs at many events.

Honors & Awards

INTERNATIONAL

2024 **Finalist**, Water, sanitation, and hygiene for the prevention and care of neglected tropical diseases

Geneva,  
Switzerland

DOMESTIC

2025 **Excellent Work Award**, The 5th Meituan Business Analytics Elite Competition

Shanghai, China

2024 **3rd Prize**, China Undergraduate Mathematical Contest in Modeling, 2024

Shanghai, China

2023 **Finalist**, Full-stack AI development engineer skills training by NVIDIA

Shanghai, China