# Jialin Zhang

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Tongji University, Computer Science, GPA: 4.40/5.00 (89.02/100) 2023-Present **Relevant courses:** Mathematical Analysis, General Physics, Linear Algebra, CPP, Data Structures, Discrete Mathematics, Digital Logic & Circuits, Probability & Mathematical Statistics, Game Theory, 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

# Website Deployment Training

- Build and maintain a mental-health website 2024.10-Present
- > Locally deploy website using the PyCharm+Django+MySQL/SQLite framework. > Publicly deploy email website. {Alibaba Cloud server + BT Panel + X-PHP(PHPStudy)}

### Research in Computer Vision (CV)

- Underwater image enhancement (2024APMCM, Third Price) 2024.11.21-25
  - > Traditional methods: White Balance, Histogram Equalization, Retinex, Dehazing.
  - » Attempted DL methods based on CNN, but lose due to lack of a training dataset.
- Suspended Sediment Concentration in Yangtze Estuary. 2024.02-Present > PyTorch + DL model for image preprocessing tasks.
- Automated Bridge Health Monitoring Using Infrared Technology 2023.09-2024.01 > OpenCV to classify infrared images and DL model to identify abnormal points
  - >Python for shortest path planning based on DFS algorithm. -Details: GitHub Link
- Tooth root canal orifice detection (CPP + Pytorch)

  2024.10-2024.11
  - > VGG for image classification and DL model 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)

#### Honors:

Tongji University Freshman Scholarship	2023
Tongji University Outstanding Undergraduate Scholarship	2024
Social Activity Scholarship of Tongji University for the Academic	2023-2024
Third Prize, 2024 Asia and Pacific Mathematical Contest in Modeling	2024
Academic Year Outstanding Mental Health Counselor at Tongji U	2023-2024
Champion, Tongji University Chess Friendship Cup	2024
Third Prize, Tongji University Student Innovation Experience Competition	on 2023
EXTRACURRICULAR ACTIVITIES	

Tongji U Chess Club - Head of the Chess Department 2024.06 - Present Outstanding Member of Guohao College, Tongji University 2023.09 - 2024.07 Leader of Outstanding Recruitment Volunteer Team in Tongji U 2024.01 - 2024.07