

# Yuntian Wu

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## Education

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**Huazhong University of Science and Technology** *Sep 2021 – Present*  
*BEng in Artificial Intelligence*

- GPA: 80.2/100 (GPA of the 6<sup>th</sup> semester: 86.77/100) ([Transcript](#) [🔗](#))
- TOEFL: 99/120 (best score: 100/120)

## Exchange Program

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**Cambridge University** *Jan 2022 – Feb 2022*  
*Two-week Cambridge Intensive Programme in Machine Learning*

- Major Course: Machine Learning                      Grade: A
- Outcome: Gained a comprehensive understanding of machine learning, tested the performance differences of various regression methods, and built an LSTM model for stock prediction

## Publications

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**Invariant Spatiotemporal Representation Learning for Cross-patient Seizure Classification. In NeuroAI @ NeurIPS2024.** *Oct 2024*  
*Yuntian Wu, Yuntian Yang, Jiabao Sean Xiao, Chuan Zhou, Haochen Sui, Haoxuan Li*  
**Organized by Yoshua Bengio who won 2018 A. M. Turing Award** ([Accepted Papers](#)) [🔗](#)  
<https://openreview.net/forum?id=Ex6wAivo7G> [🔗](#)

## Honors & Awards

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Honor List, Harmful Brain Activity Classification on Kaggle (491/2767) *Apr 2024*  
Honor List, LLM Prompt Recovery on Kaggle (507/2175) *Apr 2024*  
Honor List, Multi-Class Prediction of Obesity Risk (288/3587) *Feb 2024*

## Research Projects

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**EEG-based Cross-patient Seizure Classification** *Beijing, China*  
*Visiting student working with Dr. Haoxuan Li at Peking University* *May 2024 – Present*

- Tested and modified the program codes mentioned in an ICLR 2022 paper named Self-Supervised Graph Neural Networks for Improved Electroencephalographic Seizure Analysis
- Reproduced models of MSTGCN, FeatureNet, and PANN as baselines.
- Developed a novel method to learn invariant spatiotemporal representations for training a seizure classification model, enabling accurate classification of seizure types across different patients.

**Harmful Brain Activity Classification on Kaggle** *Wuhan, China*  
*Huazhong University of Science and Technology* *Jan 2024 – Apr 2024*

- Analyzed the dataset, examining its data features across both temporal and frequency domains.
- Reproduced basic models like ChronoNet to test their capabilities
- Carried out an ensemble learning method using ResNet1D, EfficientNetB2, and EfficientNetB0

**Object Detection and Tracking** *Wuhan, China*  
*Huazhong University of Science and Technology* *Mar 2024 – Jun 2024*

- Reproduced TransTrack, Fast R-CNN, and MambaYOLO models for evaluation
- Utilized YOLOv8 as the detector to adapt trackers like SORT, ByteTrack, and BOT-SORT for performance
- Tested the models on a bee detection and tracking dataset and wrote a technical report about their performance

### **Portrait Addition Program**

*Research Intern for Associate Professor Bin Shi from Xi'an Jiaotong University*

*Xi'an, China  
Oct 2022 – Jul 2023*

- Benchmarked the model from the WACV 2020 paper *Deep Image Blending*
- Applied U<sup>2</sup>-Net for human portrait segmentation in foreground images and designed a square selection box to create a canvas mask, allowing precise control of the fusion position
- Optimized the style loss in the original model while retaining content loss to reduce cross-color artifacts in the enhanced model during portrait fusion

### **Deep Learning-based Handwritten Numeral Identification Program**

*Huazhong University of Science and Technology*

*Wuhan, China  
Dec 2021 – Mar 2022*

- Learned knowledge about the WAP series, ABM, and CAN through thesis and papers
- Designed relevant applications and tested them in real-life
- Reproduced fundamental layers within these models

## **Internship**

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### **Peking University**

*Visiting Student*

*Beijing, China  
May 2024 – Present*

- Joined Dr. Haoxuan Li's team, who is supervised by Professor Xiaohua Zhou, to conduct research focused on introducing causal inference concepts into AI for Science applications.

### **LongShine Technology Group Co., Ltd.**

*System Engineer*

*Beijing, China  
Jun 2024 – Jul 2024*

- Built, packaged, and deployed the K8S cluster with Linux and participated in the construction of a new cluster and the deployment of applications, while implementing Prometheus for comprehensive cluster monitoring

### **LongShine Technology Group Co., Ltd.**

*System Engineer*

*Beijing, China  
Jul 2023 – Aug 2023*

- Participated in the operation and maintenance of the Jingtong system, a popular app among local residents that provided reliable service to athletes and government officials during the **Beijing 2022 Winter Olympics**, and continues to deliver essential information and services to residents today

### **Xi'an Jiaotong University**

*Research Intern*

*Xi'an, China  
Oct 2022 – Jul 2023*

- Designed the program architecture and conducted all experimental operations for the deep learning-based portrait fusion program

## **Skills & Hobbies**

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**Computer Skills:** Python, C/C++, Matlab; Pytorch, Tensorflow, Kubernetes, Git

**Hobbies:** canoeing, wilderness survival, skiing, guitar, drum set