

Yuntian Wu

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Education

Carnegie Mellon University

Aug 2025 – Dec 2026

M.S. in Artificial Intelligence Engineering (AIE-BME)

- Department Head's Fellowship
- GPA: 3.95/4.0

Huazhong University of Science and Technology

Sep 2021 – Jul 2025

B.Eng. in Artificial Intelligence

Publications

Signal or Noise? Understanding Generative Models for Real-World Sensor Time Series.

arXiv preprint, 2026.

Zitao Shuai*, Zongzhe Xu*, **Yuntian Wu***, Sirui Li, Tianhong Li, Yuzhe Yang

TATTOO: Training-free AesTheTic-aware Outfit recOmmendation.

ICME 2026 *Spotlight*.

Yuntian Wu*, Xiaonan Hu*, Ziqi Zhou, Hao Lu

Invariant Spatiotemporal Representation Learning for Cross-patient Seizure Classification.

NeuroAI @ NeurIPS 2024.

Yuntian Wu*, Yuntian Yang*, Jiabao Sean Xiao, Chuan Zhou, Haochen Sui, Haoxuan Li

Research Experience

HAIL Lab, University of California, Los Angeles

Graduate Student Researcher

Apr 2026 – Present

Supervised by Dr. Yuzhe Yang, UCLA

- Co-led SensorGen, contributing to model implementation, experimental design, analysis, and paper writing for a unified study of generative models across 14 sensor-generation settings, 7 datasets, and 12 modalities.
- Developing a unified sensor encoder for heterogeneous physiological and wearable signals using raw-waveform inputs and autoregressive prediction of discretized targets to learn transferable representations across modalities, datasets, and study contexts for both discriminative and generative tasks.
- Systematically evaluated generative model families and design choices in SensorGen, showing strong overall performance of flow matching and the importance of time-frequency modeling for high-frequency signals.

Huazhong University of Science and Technology

B.Eng. Thesis and Follow-up Research

Mar 2025 – Sep 2025

Supervised by Dr. Hao Lu, HUST

- Proposed TATTOO, a training-free aesthetic-aware outfit recommendation method that uses multimodal large language models to generate target-item descriptions and structured aesthetic profiles through aesthetic chain-of-thought reasoning.

- Designed a dynamic entropy-gated fusion mechanism to combine visual, textual, and aesthetic representations in a shared embedding space for candidate ranking.
- Led the experimental evaluation against OutfitTransformer, FashionGPT, and other baselines, as well as the writing and revision of the paper.

Beijing International Center for Mathematical Research, Peking University

Visiting Student

May 2024 – Oct 2024

Supervised by Haoxuan Li, PKU

- Proposed an invariant spatiotemporal representation learning method for cross-patient seizure classification, using heterogeneous risk minimization to construct environments and a learned mask to separate invariant and variant EEG representations.
- Combined self-supervised temporal prediction, supervised seizure classification, and gradient-variance regularization to promote invariant representations across patient groups.
- Implemented and evaluated MSTGCN, FeatureNet, and PANN baselines on the TUSZ dataset.

Xi'an Jiaotong University

Research Intern

Oct 2022 – Jul 2023

Supervised by Dr. Bin Shi, XJTU

- Extended Deep Image Blending for portrait composition by integrating U²-Net-based portrait segmentation, adapting and fine-tuning the blending model, and building an end-to-end pipeline with a user interface.

Teaching & Academic Service

Carnegie Mellon University

Teaching Assistant - Grader

Jan 2026 – Dec 2026

- 42-632 “Neural Signal Processing”, 42-631 “Neural Data Analysis”
- Graded homework and exams. Assisted with office hours to answer questions and support students.

AAAI Conference on Artificial Intelligence

2026, 2027

Conference Reviewer

Internships

LongShine Technology Group Co., Ltd.

Jun 2024 – Jul 2024

System Engineer Intern, Beijing, China

Jul 2023 – Aug 2023

- Built and deployed Kubernetes clusters on Linux, supported application deployment, and configured Prometheus for cluster monitoring.
- Participated in the operation and maintenance of the Jingtong system, supporting issue resolution and stable service delivery for local users.

Skills

Python, C/C++, MATLAB, Spark SQL; PyTorch, TensorFlow, Kubernetes, Git