

Yu Wu

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EDUCATION

Rutgers, The State University of New Jersey, New Jersey, USA Aug. 2020-present
PhD candidate in Electrical and Computer Engineering (Advisor: Prof. [Anand D. Sarwate](#)) GPA: 4.0/4.0
University of Science and Technology of China (USTC), Anhui, China Jun. 2017-Jun. 2020
Master's in Electronic Engineering and Information Science (Advisor: Prof. [Bin Liu](#))
University of Science and Technology of China (USTC), Anhui, China Jul. 2013-Jun. 2017
Bachelor's in Information Security

WORK EXPERIENCE

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- **Collaborative Machine Learning for Mobile-Edge-Cloud System** | real-time inference, distributed system, computer vision, ViT
 - Research Assistant at ECE department of **Rutgers** Sep. 2020- present
 - To enhance legacy mobile ML models, we propose the Learning to Help diagram to jointly utilize external machine or human expert on hybrid system. Our method is **Bayes optimal** and increase the system overall accuracy by **4%~12%**. [[paper1](#), [paper2](#), [code](#)]
 - **Online Learning Algorithm for Audio Echo Cancellation** | least mean square, adaptive filtering, acoustic signal processing
 - Researcher (Intern) at **Nokia Bell Lab** Jun. 2022-Aug. 2022
 - Toward the misalignment error of online estimation system, we analyze the accuracy and effectiveness of “delay and extrapolate” algorithm. Our method proves the **optimality** and **corrects misuse** in previous works. [[paper](#)]
 - **Human-computer Interactive Sensing** | wearable device, human-centered computing, human-computer interaction
 - Researcher (Intern) at X-discovery Lab, **Dartmouth College** Dec. 2018-Apr. 2019
 - To achieve human-computer interaction through soft material, we propose an inductive sensing based prototype called Tessutivo. We yielded **93.9% real-time accuracy** for object recognition. [[paper](#), [demo](#)]
 - **Anti-interference for WiFi-based Human Activity Recognition (HAR)** | CSI, non-intrusive sensing, machine learning, PyTorch
 - Researcher Assistant at EEIS department of **USTC** Sep. 2017-May 2020
 - To mitigate the interference components in WiFi signals, we propose PhaseAnti system. Our method **improves up to 16%** on accuracy and **9× faster** recognition speed. [[paper1](#), [paper2](#)]

PUBLICATIONS

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- **Y Wu**, Y Li, et al., "Learning to Help in Multi-Class Settings." [ICLR 2025](#)
 - **Y Wu**, and Anand Sarwate, "Learning to Help: Training Models to Assist Legacy Devices." [ISIT 2024 Workshop IT-TML](#)
 - J Huang, B Liu, C Miao, Y Lu, **Y Wu**, et al., "PhaseAnti: An anti-interference WiFi-based activity recognition system using interference-independent phase component." [IEEE Transactions on Mobile Computing 2021](#)
 - J Huang, B Liu, P Liu, C Chen, N Xiao, **Y Wu**, et al., "Towards anti-interference WiFi-based activity recognition system using interference-independent phase component." [INFOCOM 2020](#)
 - J Gong, **Y Wu**, et al., "Tessutivo: Contextual interactions on interactive fabrics with inductive sensing." [UIST 2019](#)
 - **Preprint**
W Zhang, Y Li, Z Dong, **Y Wu**, et al., "Enhancing LLM-Based Code Generation in Large-Scale Projects." [arXiv \(2024\)](#)
Z Yu, L An, Y Li, **Y Wu**, et al., "A Universal Feature Extractor for Scientific Data without Explicit Feature Relation Patterns." [arXiv \(2024\)](#)
Y Li, Z Dong, E Luo, **Y Wu**, et al., "Enhancing Dyna-Style Model-Based Reinforcement Learning With Data Filter." [arXiv \(2024\)](#)

CURRENT RESEARCH FOCUS

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- Efficient and reliable AI for hybrid system (learning with reject option, task offloading, human-in-the-loop, optimization)
 - LLM Collaboration (LLM Route, human-computer interaction)

SKILLS

Programming: Python, C, C++, MATLAB, Processing, SQL, Java, R

Technical tools: PyTorch, NumPy, SciPy, Pandas, scikit-learn, Slurm, Git