

Yi-Shan (Annie) Wu

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EDUCATION

Binghamton University, State University of New York, Thomas J. Watson College of Engineering and Applied Science
Master of Science in Computer Science, Concentration in AI-track *Expected May 2026*
Cumulative GPA: 4.00/4.00
Relevant Coursework: Data Mining, Machine Learning, Internet of Things

University of Alabama at Birmingham (UAB), Department of Computer Science **Birmingham, AL**
Coursework toward Computer Science master's degree *June 2024*
Cumulative GPA: 3.70/4.00
Relevant Coursework: Advanced Algorithm, GPU programming, Probability and Statistic, Nature Language Processing

TECHNICAL SKILLS

Languages: Python, C, Arduino
Software and OS: Microsoft Office Suite, SQL, CUDA, Pytorch, Tensorflow, Hugging Face
Additional: Microsoft PowerBI, Google App Script
Certifications: Nature Language Processing with Python (Udemy), CUDA programming Masterclass with C++ (Udemy)

PROFESSIONAL EXPERIENCE

Flow.Inc, Data Design Specialist | Taipei, Taiwan (R.O.C) *December 2018 – April 2022*

- Used Google Apps Script to produce operational data and optimized team's work flow through automation
- Defined and presented data on team's work assignment, content, performance for manager in weekly online reports using Power BI
- Recommended as an annual MVP team member for vision driven, innovation, inspiration, participation, and strategic thinking ("VIIPS")

Recreation of UAB, Operations Attendant | Birmingham, AL *June 2023 – December 2023*

- Managed customer information of recreational equipment and monitored check-ins of the facility
- Completed setup/breakdown for events and attended staff meetings

RESEARCH EXPERIENCE

Breath Parameter Monitoring, Graduate Research Assistant | Vestal, NY *August 2024 – Present*

- Extract and analyze respiratory motion using a comprehensive wearable health monitoring system under the mentorship of Professor Yincheng Jin
- Implement teensy 4.1 with IMU and MEMS microphone sensor using Arduino on the glasses as mobile device, ultimately submitting work for publication in an academic journal

PROJECT EXPERIENCE

Fine-Tuning Respiratory Sound to Address Class Imbalance, Academic Project | Vestal, NY *August 2024 – Present*

- Implemented audio diffusion model as a conditional neural vocoder to generate high-fidelity synthetic respiratory sound samples for data augmentation
- Applied adversarial fine-tuning to align the feature distributions between synthetic and real data, mitigating data imbalance and enhancing classification accuracy
- Expand on the work of "Adversarial Fine-tuning using Generated Respiratory Sound to Address Class Imbalance" published in Deep Generative Models for Health Workshop

Noise Augmentation on CUDA, Team Member | Birmingham, AL *August 2023 – November 2023*

- Implemented Gaussian noise tiling and channel-wise computation GPU kernel with C
- Compared speed with CPU and different algorithms kernel on GPU
- Created performance evaluation model accuracy and comparison with original design

LEADERSHIP EXPERIENCE

Girls Who Code, Community Outreach Committee | Vestal, NY *September 2024 – Present*

- Plan and host community coding and technology outreach events for middle and high school female students
- Empower more young girls to dive into the field of Computer Science