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 December 2025*
Cumulative GPA: 4.00/4.00

University of Alabama at Birmingham (UAB), Department of Computer Science **Birmingham, AL**
Coursework toward Computer Science Master's degree *January 2023 – June 2024*
Cumulative GPA: 3.70/4.00

Chang Gang University, Department of Medicine **Taoyuan, Taiwan, ROC**
Bachelor of Biomedical Science *August 2013 – June 2017*

TECHNICAL SKILLS

Languages: Python, C, Java, MySQL
Software and OS: CUDA, Pytorch, Tensorflow, Hugging Face
Additional: Microsoft PowerBI, Advanced spreadsheet Modeling
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*

- Engineered an automated workflow in Google Apps Script, enhancing team efficiency by automating tasks in Google Sheets, including usage tracking, email reminders, cell protection, job scheduling, and access permissions.
- Performed data cleansing and consolidation of employee work data, ensuring accuracy in daily reports and enabling data-driven insights.
- Developed and presented weekly online reports in Power BI for management, visualizing team assignments, productivity metrics, and performance insights.
- Awarded annual MVP recognition for vision alignment, innovation, inspiration, participation in advancing team goals ("VIIPS") through strategic business insights and analysis.

RESEARCH EXPERIENCE

Facial Expression Recognition Using IMU Data Collection, *Graduate Research Assistant* | Vestal, NY *August 2024 – Present*

- Developed an advanced wearable health monitoring system to capture and analyze facial expressions leveraging IMU data to discern nuanced facial movements associated with expressions under the mentorship of Professor Yincheng Jin.
- Captured precise accelerometer, gyroscope and magnetometer with high-resolution and synchronous facial video record with a video monitor on the screen.
- Conducted advanced data mining and pattern analysis on labeled emotional data, identifying distinct IMU patterns across six primary emotions (happiness, anger, sadness, fear, surprise, and disgust). Analysis aims to uncover unique motion signatures for each emotion, contributing to the development of a custom mobile platform.

PROJECT EXPERIENCE

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

- Integrated an Audio Diffusion Model with **Dynamic Parameters** and **Adaptive Gradient Clipping**, enhancing the speed of diffusion while maintaining audio fidelity.
- 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, *Academic Project* | Birmingham, AL *August 2023 – November 2023*

- Optimized GPU kernels in C for Gaussian noise augmentation, leveraging CUDA for efficient tiling and channel-wise computation, evaluating speed-up and efficiency across CPU and various kernel algorithms.

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