

Yi-Shan (Annie) Wu

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EDUCATION

SUNY-Binghamton University

Master of Computer Science(transiting into PhD program)

June 2026

Cumulative GPA: 4.00/4.00

Award

Flow.Inc, Data Enigneer

Awarded annual MVP recognition in advancing team goals "VIIPS"

SKILLS

Programming Languages: Python, C, Java, MySQL

AI/ML Libraries & Frameworks: ML algorithm, PyTorch, TensorFlow, Hugging Face, deep learning

Algorithm & Optimization: Data Structure, ranking, recommendation, CUDA, parallel computing

Data Analytics & Visualization: ETL pipeline, Power BI, Cloud Computing (AWS, GCP)

Certifications: Natural Language Processing with Python (Udemy), CUDA Programming Masterclass with C++ (Udemy), Project Management

EXPERIENCE

Facial Expression Recognition Using IMU Data, Research Assistant

Aug 2024 - Present

- Implementing **smart glasses** by **Human-AI Interaction** by using **LSTM+MLP**
- Building an **IMU preprocessing pipeline** to extract most meaningful feature by **DWT, Cluster, PCA**
- Applying **transformation** for training recognized heterogeneous and non-uniform pattern
- Accomplished **model generalization** by implementing **cross-validation** by doing **new user tasks**

Gaussian Noise Augmentation, Academic Project

Dec2023 - June 2024

- Optimized CUDA efficiency **tiling** and **channel-wise** computation
- Using **Shared Memory** to Reduce Global Memory Access
- Implemented **warp-level operations** for faster execution.
- Diagnosis **software test engineering** using Nsight Compute, cuda-memcheck, and nvprof for debugging

Flow.Inc, Data Engineer

Nov 2018 - April 2022

- Implemented automated data pipelines optimizing Google Sheets workflows significantly improving operational **10+** times efficiency and data accuracy over **90%**
- Deployed end-to-end **ETL pipelines** with **MySQL, Django** and **AWS S3**, and utilizing **Power BI** to **optimize performance** of real-time analysis metrics across **100+** workers with **50+ features**.
- Created and developed reporting infrastructure using **Power BI** and **Google spreadsheet** from scratch to provide real time insights into product and business KPIs with more than 95% accuracy.
- Collaborated with **cross-functional teams**, including product managers, full-stack engineers, and vendor representatives, to conduct a comprehensive product to efficient the pipeline of **large-scale analysis system**

Neuroscience in Depression and Anxiety, Research Contributor

Jul 2017 - Nov 2018

- Developed and applied **machine learning models** for analyzing MRI and DTI neuroimaging data.
- Utilized MATLAB, and deep learning frameworks (**TensorFlow/PyTorch**) to process fMRI data
- Contributed to the feature extraction, data preprocessing, and **statistical modeling** of brain connectivity networks.

PUBLICATION

Facial Expression Recognition Using IMU Data (Expected **ICASSP 2025**)

Diffusion tensor imaging and resting-state functional MRI reveal altered brain network hubs on a depression knockout mouse model (**ISMRM 2019**)