Yi-Shan (Annie) Wu

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3.5 years experience of driving business efficiency and accuracy through automation, predictive analytics, and scalable solutions with strong technical and project management skills. Highly skilled computer science professional with expertise in AI/ML, data analytics, and cloud computing.

EDUCATION

SUNY-Binghamton University

Master of Computer Science GPA: 4.00/4.00 *Dec 2025*

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

- Designed and deployed a synchronized sensing platform on smart glasses using the ICM-20948 IMU and egocentric video for real-time expression monitoring.
- Built a cross-modal FER pipeline aligning temporal IMU signals (via AutonLab MOMENT pipeline) with video-based features extracted by ARBEx (IR50 + MobileFaceNet + ViT), using COMODO loss to project both modalities into a shared embedding space
- Enhanced model generalization through cross-validation on new user datasets.

EXPERIENCE

Flow.Inc

Data Engineer *Nov 2018 - April 2022*

- **Reduced employee turnover by 30%** through predictive analytics and automated interventions, by developing an CRM decision support system with LLM-like analysis.
- **Reduced manual case review time by 60%** and improved knowledge retrieval efficiency, by developing and optimizing an spreadsheet-based automation system to streamline EAP & employee query resolution.
- **Increased operational efficiency 10x and boosted accuracy to 90%**, by automating data workflows, deploying scalable ETL pipelines (MySQL, Django, AWS S3) and integrated Power BI dashboards for 100+ users tracking 50+ KPIs.
- Collaborated cross-functionally with engineers, PMs, and vendors to ensure scalable AI deployment in enterprise CRM applications.

PROJECTS

GAN-Based Data Augmentation & Model Fine-Tuning *Jul 2024 - Dec 2024*

- Optimized adversarial data generation using GANs, cosine scheduler, and dynamic gradient adjustments to mitigate class imbalances.
- Increased model accuracy from 26% → 89% through fine-tuning and adaptive training strategies.
- Refined model robustness with hyperparameter tuning and Transformer-based fine-tuning for real-world deployment.

DrugPair2Vec – Biomedical Text Analysis *Jul 2023 - Dec 2023*

- Implemented PubMedBERT pretrained model on Colab GPU for biomedical text processing.
- Utilized DrugPair2Vec algorithm to analyze chemical interactions and drug relationships.
- Compared chemical similarities using Scikit-learn's Jaccard score and enriched findings with DrugBank Online data.

SKILLS

- **Programming Languages:** Python, C, Java, MySQL
- **AI/ML Libraries & Frameworks:** PyTorch, TensorFlow, LLM, Deep Learning
- **Algorithm & Optimization**: Data Structure, recommendation, parallel computing
- **Data Analytics & Visualization:** ETL pipeline, Power BI, Cloud Computing (AWS, GCP)
- **Certifications:** Project Management (PMP & CAPM)