Yi-Shan Wu

Portfolio: https://www.anniewu-tw.com/ | **LinkedIn:** https://www.linkedin.com/in/anniewu-tw/
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Summary:
Results-driven and detail-oriented professional with a diverse background in both biomedical sciences and computer science. Possess a Master's degree in Computer Science and Bachelor's degree in Biomedical Sciences. Skilled in programming languages such as Python, Java, C, and JavaScript, with hands-on experience in projects ranging from dynamic programming optimization to real-time data streaming pipelines. Proven ability to leverage technical expertise to solve complex problems and drive innovation. Seeking opportunities to apply my unique blend of skills in a dynamic and collaborative environment.

TECHNICAL SKILLS

Languages: Python, Java, JavaScript, HTML, CSS, C/C++, Arduino
Tools & Technologies: CUDA, Google App Script, AWS, Power BI, Raspberry Pi 3, Google colab
Databases: MySQL, PostgreSQL
Frameworks & Libraries: Flask, jQuery, Bootstrap

EDUCATION

Master of Computer Science
University of Alabama at Birmingham (UAB), Birmingham, AL, USA
Expected Graduation: December 2024
GPA: 4.0

Bachelor of Science in Biomedical Sciences
Chang Gung University, Taoyuan City, Taiwan
Graduated: June 2017

RELEVANT COURSEWORK

Advanced Algorithms and Data Structures
Nature Language Processing
Probability & Statistics in Computer Science
Advanced Web Application Development
Systems Programming
GPU Programming
Matrix Algorithms for Data Science

PROJECTS

0/1 Knapsack Optimization (Dynamic Programming)

- December 2023
- Employed **dynamic programming** to solve the 0/1 Knapsack problem efficiently.
- Conducted **comparisons** between excluding and including each item to determine optimal outcomes
- Implemented a table to store **optimal solutions for subproblems,** ensuring efficiency in the

overall process
- Developed a trace-back mechanism to identify selected items and their inclusion status

DrugPair2Vec on Colab GPU
- November 2023
- Implemented **PubMedBERT** pretrained model on **Colab** GPU to analyze biomedical text data.
- Enhanced performance using CUDA libraries by optimizing **parallelism thread configuration** on the GPU.
- Utilized **DrugPair2Vec** algorithm to analyze chemical interactions.
- Compared chemical similarities using **Scikit-learn's Jaccard score.**
- Integrated and analyzed drugs data from **DrugBank** Online to enrich research findings.

Portfolio website (https://www.anniewu-tw.com/)
- September 2023 - Present
- Integrated Python Flask to handle dynamic content generation and server-side operations
- Utilized JavaScript and CSS on HTML to design an interactive and visually appealing user interface

LikeCode website (https://www.likecode.org/)
- August 2023– September 2023
- Developed a website with **Flask** and published on my own domain
- Built a database with **SQLAlchemy** to practice the user login system and to meditate the LeetCode website
- Produced **base.html** to control all the headers, footers, and navigators to make maintenance easier
- Implemented **jQuery** and **Bootstrap** to enrich **CSS** and **JavaScript** designs
- Deployed website and carry out ongoing website maintenance for updated information.

AWS Cloud Internet of Things
- July 2021 – August 2021
- Implemented an **Arduino UNO** program with Python on Raspberry Pi3
- To make specific spot alert and SNS alert practical, **AWS IoT Core** and **Rule Engine** were used to make **AWS IoT Events** send emails and **DynamoDB** to store data
- Presented data on the website or connect with a safety guidance company to facilitate monitoring and rescuing

WORK EXPERIENCE

Operations Attendant
- Recreation Center, University of Alabama at Birmingham, Birmingham, AL, USA
- June 2023 – December 2024
- Responsibilities:
  - Ensure safety and cleanliness of the facility.
  - Issue recreational equipment and monitor check-ins.
  - Communicate effectively with staff and supervisors.
  - Setup/breakdown for events and attend staff meetings.

Research Assistance

- Jieyang Chen's lab, University of Alabama at Birmingham, Birmingham, AL, USA
- January 2024 – Present
- Research project:
  - Study of Noisy injection on the NoisyMix
  - Issue the training process of N. Benjamin Erichson NoisyMix published on https://arxiv.org/abs/2202.01263
  - aim to control utility of thread through wrap and thread base on CUDA library

Intern -> Operation Planner -> Data Design Specialist

- FLOW Inc., Taipei, Taiwan
- https://www.linkedin.com/company/flow-tw/about/
- December 2018 – April 2021
- Responsibilities:
  - 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
  - Designed and drafted team's work SOPs
- Achievement:
  - Created product requirement document to find suitable workers for clients' projects (+- 9 projects per week)
  - Planning client development conference (https://topic.cw.com.tw/event/2019flow/index.html) for external AI engineers and senior managersx
  - Receive three times extra salary leverage inspiration
  - Been recommend as a annual MVP team of VIIPS candidate

ADDITIONAL EXPERIENCE

Volunteer Orientation Team Member

- University of Alabama at Birmingham, Birmingham, AL, USA
- August 2023
- Assisted international students with orientation schedule and inquiries.