ALAN LIANG

PROFILE

Dedicated Master's of Computer Science student with a background as a registered nurse for five years in Taiwan and Singapore. Transitioned to software engineering with expertise in Cloud Services, Containerization, CI/CD, and web frameworks. Positioned to excel in software engineering roles and contribute to innovative projects. Let's connect to explore my unique background and skills that bring value to the team.

DETAILS

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or scan to access

PROJECTS

MICROCONTROLLER CABINET DOOR MONITOR

- Created a Python script on Raspberry Pi to achieve real-time monitoring of cabinet doors, utilizing the MQTT protocol. Integrated seamless communication with an ESP32 microcontroller for efficient status tracking and reporting. Employed multithreading and subprocesses for enhanced performance.
- Implemented power optimization on the ESP32 by integrating a deep sleep mode, minimizing power consumption to just 40 µA. This optimization extends the lifespan of portable batteries, enabling them to power the system for up to one year.
  Microcontroller Cabinet door monitor

OPTIMIZING OPEN-SOURCE ENVIRONMENTS

- Configured development environment to address errors in MindsDB integration handler for API calls.
- Acquired familiarity with Shopify and PayPal integration APIs, utilizing Postman for generating test tables and IDs.
- Identified and resolved issues in MindsDb and PayPal scripts, debugging code to guarantee accurate output generation.
- Utilized GIT workflow for version control and delivery of the updated code.
  Open Source Project

WEB DESIGN ENHANCEMENT AND PORTFOLIO DEVELOPMENT

- Refactored the user interface of the 'Inside Pacific' Website, increasing user satisfaction by 20%.
- Implemented a web-based portfolio with a dynamic and engaging user interface, increasing user interaction by 40%, enhancing the overall user experience.

MACHINE LEARNING ANALYST - HEART FAILURE PREDICTION

- Employed ML models to analyze the Heart Failure Prediction Dataset, resulting in a 15% increase in the accuracy of predicting heart failure likelihood.
- Enhanced data distribution through intuitive visualization of predictions and analyses.

ACADEMIC SUPPORT & LEGACY GAME ENHANCEMENT

- Mentored and supported junior students through the software development cycle, reducing project completion time.
- Debugged and tested legacy code for a 200-player online game, achieving a 15% reduction in bugs for improved stability.
- Implemented an interactive game interface, increased user satisfaction through intuitive design and immersive sound effects.

TECHNICAL SKILLS

Languages: C++, C#, C, Python, Java, SQL, R, Haskell, SWIFT, HTML, CSS, JavaScript, Bash.
Cloud Platforms and Database: Google Cloud, AWS, MySQL, DB2, MongoDB, Azure.
Libraries and Frameworks: React, Apache Kafka, Spring, Spring JDBC, Junit, Typescript, PyTorch, TensorFlow.
Technologies: REST API, SOAP, Jenkins, Maven, Version Control (GIT), MindsDB, Docker, Unity, Figma, microcontroller, Linux.

EDUCATION

Master of Science | Computer Science – Spring 2024 *University of the Pacific, Stockton, CA. Major GPA 3.9/4.0*
Bachelor of Science | Nursing – 2009-2016 *National Taichung University of Science And Technology, Taiwan*

PROFESSIONAL EXPERIENCE

Cardio Catheterization and Emergency Room Registered Nurse **Dec 2016 – Aug/2022**
Silver Award ***2019***
Responsibilities:

- Coordinated with 50 people of various cultures in the lab and provide accurate responses for patients in urgent situations.
- Streamlined procedures and detected early signs of complications for 30 patients per day.
- Evaluated and solved potential problems with 80 colleagues and collaborated with large teams and departments.