姚皇宇 Alex Yao

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R&D SOFTWARE ENGINEER

Software Engineer with two years of experience in developing a web-based IT toolchain involving full-stack web and Windows client development. Build a git workflow for a team of 6 eliminate at least 1 hour of extra time on writing file change log. Three years of autonomous robot design and implementation demonstrate the applied biological model and awarded the Best Demo Award on IEEE AICAS conference.

SKILLS

Programming Languages: C++ | Python | PHP
Web Technologies: Laravel | HTML | CSS | Javascript (JQuery)
Databases: MySQL (MariaDB) | MongoDB
Robotics: Arduino | Raspberry Pi | STM32 | ROS (Robotic Operating System) | OpenCV
Neural Networks: SNN (Spiking Neural Networks)

WORK EXPERIENCE

CT-Cloud Technology (誠雲科技), Taiwan | R&D Engineer | August 2021 - June 2024

- Develop an IT assistance web server product using PHP (Laravel), Python, MySQL, and MongoDB; maintain Windows client agent written in C++.
- Fast and diverse module development: Solely developed at least 10 new modules for different customers and on average, only took 1 month for a complete module.
- Scrum team lead: Organized the refactoring plan and rules for the next generation product including Python coding standards and CI (continuous integration) flows that resulted in saving around 30 minutes of product meeting per week.
- Legacy tool renovation: Migrated a VC 6.0 command-line utility to Visual Studio 2017 compatible with more user friendly interface and reduced around 50% of compile time.

EDUCATION

Master of Science, Systems Neuroscience, Data Science Program Certified | 2021
National Tsing Hua University (NTHU), Hsinchu, Taiwan | GPA: 3.96 / 4.3

- Courses: Introduction to Computational Neuroscience | Network Science | Music Information Retrieval

Bachelor of Science, Major in Life Science, Minor in Economics | 2018
National Tsing Hua University (NTHU), Hsinchu, Taiwan | GPA: 3.55 / 4.3

- Courses: Data Structures | Statistics | Scientific Computing | Introduction to Artificial Intelligence
- Cross-Strait Summer Exchange Scholarship | Xi'an Jiaotong University | 2017

PROJECTS

Flyintel
https://github.com/gogoalexy/FlyintelBot | Chung-Chuan Lo Laboratory

- The owner and the main developer of the Flyintel project, a complete insect navigation algorithm demonstration platform built on a Raspberry Pi with software written in C++.
- The vehicle navigated in a confined area like a small insect with less than 100 neurons and visualize the neuron activities in real-time.
- Presented on 2019 IEEE International Conference on Artificial Intelligence Circuits and Systems (AICAS) with title "Flyintel – a Platform for Robot Navigation based on a Brain-Inspired Spiking Neural Network" and was awarded the NEUROTECH Best Demo Award.

SNN-in-MIR
https://github.com/gogoalexy/SNN-in-MIR | Music Information Retrieval course at NTHU

- The sole developer of the SNN-in-MIR project, which is a spiking neural network based onset detection (detect the position of each note in a music script) system.
- Design a spiking neural network based onset detection system with a fast 17-neuron network.
- The first spiking neural network for onset detection in music information retrieval (MIR) field (according to Google scholar search on Sep. 9, 2024).