



楊晴穎 CHING YING, YANG

Hello! I'm Ellie, a dedicated and passionate individual with expertise in data science, software systems, and firmware development. My journey in these fields has equipped me with the analytical skills to extract valuable insights from complex datasets and the technical proficiency to design and implement robust software solutions.

I have experience working with programming languages such as Python and C for data analysis, as well as hands-on experience in firmware development, where I focused on optimizing performance and enhancing device functionality. This diverse skill set allows me to approach problems from multiple angles, ensuring effective solutions.

 TAIWAN  <https://www.linkedin.com/in/chingying-yang-766192216/>

Work Experience



Firmware Engineer • Trend Power Technology Private Limited Taiwan Branch (Singapore)

Firmware Engineer Work Content

- **Embedded Systems Design:** Developed and implemented embedded systems solutions, focusing on optimizing performance and reliability for various applications.
- **Debugging and Testing:** Conducted thorough debugging and testing processes to ensure software quality, functionality, and adherence to industry standards.
- **Diagnostic Module Configuration:** Configured diagnostic function modules to enhance system monitoring and troubleshooting capabilities, facilitating effective maintenance.
- **Communication Protocols:** Implemented and managed communication protocols (e.g., UART, SPI, I2C) to ensure seamless data exchange between system components.

Key Projects:

- **Electric Vehicle Battery Module:** Successfully completed the Level 2 process for the electric vehicle battery module, contributing to enhanced performance, safety, and reliability in electric vehicle systems.

二月 2023 - Present



Senior Software Development Engineer • AUO Corporation

AI Algorithm Software Design Engineer Work Content

- **Software Development:** Responsible for software analysis, design, and programming to create innovative solutions.
- **Architecture Planning:** Planned and implemented software architecture and module designs while managing project timelines and progress.
- **Testing and Modifications:** Conducted comprehensive software testing and made necessary modifications to enhance performance and reliability.
- **Data Management:** Performed data cleaning and analysis to ensure data integrity and usability for AI applications.
- **Technology Development:** Developed new software technologies and tools to improve operational efficiency.
- **AI Algorithm Development:** Created relevant AI application algorithms to solve complex problems and enhance system capabilities.

- **Cloud Deployment:** Established cloud deployment strategies and CI/CD processes to streamline development workflows.

Key Projects:

- **Panel Defect Detection:** Achieved a classification model with 95% precision and 70% recall, effectively identifying object types and locations.
- **Machine Learning Analysis System:** Reduced labor costs and improved tool utilization by over 90%, enhancing module computing efficiency by 90.3%.
- **Cloud Automated Report Construction:** Developed a system to automate daily data retrieval from multiple machines, visually displaying results for improved decision-making.

九月 2021 - 一月 2023



Full-end Development Engineer • Genesys Technology Ltd.

Software Design Engineer Work Content

- **Project Planning and Design:** Led the planning and design phases for software projects, ensuring alignment with client requirements and project goals.
- **Software Development:** Responsible for comprehensive software analysis, design, and programming, utilizing best practices to deliver high-quality solutions.
- **Architecture and Module Design:** Planned and implemented software architecture and module designs, effectively managing the progress of software development.
- **Testing and Modifications:** Conducted thorough software testing and made necessary modifications to enhance functionality and performance.
- **Database Design:** Designed and architected databases to support application functionality and data integrity.
- **Customer Engagement:** Facilitated communication with clients, providing education and training on software functionalities to ensure user satisfaction.

Key Projects:

- **Car Rental System:** Successfully completed the development of a comprehensive car rental management system, enhancing operational efficiency.
- **Form Q&A and Test Function:** Developed an automated form generation tool that significantly reduced manual effort, streamlining processes.

二月 2020 - 八月 2021

Educational



2020 - 2021

National Taipei University

Information Management

Focusing on information technology, I am dedicated to fostering academic research and practical applications. My studies encompass areas such as artificial intelligence, software engineering, cloud computing, data mining, and information security. I am particularly committed to advancing research in data science.



2016 - 2020

National Taipei University

Business Administration in Digital Marketing Minor in Economics

The courses primarily cater to the Department of Statistics and the Department of Business Management, emphasizing interdisciplinary teaching methods that integrate both fields. In addition to developing management skills, students are equipped with operational

competencies, as well as strong logical thinking and analytical abilities.

Publication

- **Title:** Portfolio Dynamic Trading Strategies Using Deep Reinforcement Learning
Published: July 30, 2023
Publisher: Springer-Verlag, Berlin, Heidelberg/**soft computing /Application of soft computing**
Description: This paper explores the development of dynamic trading strategies for portfolio management utilizing deep reinforcement learning techniques. The research demonstrates how these strategies can optimize decision-making processes in financial markets, providing insights into effective trading practices.
- **DOI :** <https://doi.org/10.1007/s00500-023-08973-5>

Awards and Recognitions

- **2017:** Excellent Marketing Planning Award, 3rd Chongyue Marketing Awards
- **2017:** Forward-looking Idea Award, 3rd Chongyue Marketing Awards
- **2018:** Excellent Works Award, Global Brand Design Competition
- **2018:** Third Place, Innovation Hackathon (IoT)
- **2018:** Ministry of Education Special Award, Innovation Hackathon (IoT)
- **2018:** Top 12 National Finalist, Second National College and University Business Competition (American Mary Kay Dream Launch)
- **2019:** Excellent Work Award, Innovation Hackathon (AIoT)
- **2020:** Best Technology Award, Innovation Hackathon (AIoT)
- **2021:** Outstanding Research Paper Award, TSC Thesis Award (AI Information Category)

Skill

- C/C++
- python
- Java
- JavaScript
- SQL/MySQL
- Data Analytics
- Linux
- Pytorch

Language

- English – Intermediate
- Chinese – Advanced