Ming-Yi Wei

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Education

- **National Taiwan University of Science and Technology (NTUST), Taipei, Taiwan** **08/2019-06/2023**

  Degree: Bachelor's degree in Electrical Engineering

  - Overall GPA: 3.51/4.00 | Last two years GPA: 3.79/4.00
  - **Relevant Courses**: Multimedia Technology & Application, Quantitative Investment Analysis, Blockchain & Data Analysis, Electrical Engineering Special Projects, Introduction to Data Science, Network Security, Data Science & Green Energy Technology, Digital System Design, Computer Programming, Applications of Artificial Intelligence

Academic Projects

- **Introduction to Data Science**
  - Developed a music genre classification model and achieved the highest accuracy (93%) in the end-of-term project for the entire class
- **Applications of Artificial Intelligence**
  - Used OpenPose to develop a home care application that enables elderly individuals at home to exercise safely, precenting incorrect postures or unstable balance that could lead to secondary injures due to falls
- **Quantitative Investment Analysis**
  - Designed proprietary stock price assessment indicators, implemented quantitative investment analysis with Python, and achieved the class's highest annualized return rate (29%) by practical implementation

Work Experience

- **TaiwanMobile, Taipei, Taiwan** **07/2023-Present**

  Data Engineer

  - Analyzing user data to develop a Recommendations AI with Federative Learning for marketing, customizing advertisements based on user preferences to enhance customer purchase intent
  - Utilizing web scraping techniques to fetch the latest news and social media trends and employing generative AI to generate phishing emails, aiding businesses in conducting employee social engineering assessments and educational training
  - Maintaining company OpenRPA projects and creating related user documentation to facilitate quick onboarding for other users
- **Hewlett Packard Enterprise, Taipei, Taiwan** **07/2022-06/2023**

  Product Engineer Intern

  - Developed data analysis tools to help the team improve overall work efficiency and track production status
  - Provided production reports to help the team in track and identify factory issues, and streamlined the overall inspection process to reduce operation time by 50%
  - Acquired server knowledge, offered solutions to production problems, and handled assembly and documentation for AMD model DL325
- **China Engineering Consultants, Inc, Taipei** **07/2022-12/2022**

  Computer Vision Engineer Intern

  - Developed user interfaces to enhance user experience and usability, and deployed them effectively to could-based systems
  - Created object detection algorithms and models to track vehicle movements and determine whether vehicles are violating traffic rules
  - Helped users reduce time spent on capturing vehicle violations by transitioning from manual data collection to automated recognition, reducing the capture time per violation from 90 seconds to 5 seconds.

Research Experience

- **Advanced Intelligent Image and Vision Technology Research Center, Taipei** **08/2021-06/2023**

  Research Assistant, advised by Pro. Jing-Ming Guo

  - Utilizing pose estimation to extract the speaker's body language features, avoiding the challenges faced by RGB-based features. This serves as a basis for distinguishing DeepFake images from genuine ones
  - Conduct research to enhance the effectiveness of finger vein recognition and mitigate misidentification caused by variations in image quality, ultimately achieving a performance of 99.80% accuracy
  - Deployed vein recognition model on Azure, leveraging cloud computing to overcome IoT device limitations. Created a vein recognition prototype using Raspberry Pi infrared camera setup

Publications

1. **W. Ming**, H. Chin-Hsien, "Improve Lightweight Convolutional Neural Network Applied to Finger Vein Recognition system," 2023 Asia-Pacific Signal and Information Processing Association Annual Summit and Conference (APSIPA ASC), Taipei, to be published October 2023

Leadership AND Extracurricular Activities

◆ **NTUST Google Developer Student Club** **08/2022-07/2023**

Co-founder and Core team member

- Teamed up with the Department of Computer Science to host a speaker series, inviting industry experts to share experiences, drawing an attendance of 300 participants
- Organized a Quantitative Trading Reading group, serving as a host and partnering with the industry companies to provide an initial capital of NTD$90000 for practical quantitative trading; achieved an annual return rate of 36%

◆ **NTUST Students Association** **08/2021-07/2022**

Vice President

- Organized a Christmas market involving participation of over 60 clubs and attracting more than 1,000 attendees, and securing sponsorship from various companies, totaling over NTS$30,000 in funds
- Served as student representative for the COVID-19 Pandemic Response Committee and the Gender Equality Education Committee, working to protect students' rights and promote gender equality

◆ **Electrical Engineering Department Student Association** **08/2020-07/2021**

President

- Collaborated with clubs and teams to organize intercollegiate camping events involving four schools and thirteen campuses.
- Organized company visits to Trend Micro, Delta Electronics, HPE, and others to keep students informed about the latest industry technologies and research trends

◆ **International Friendship Ambassador Club** **08/2020-07/2021**

Activity Leader

- Helped the school organize ceremonial events (such as opening and graduation ceremonies) and facilitated diverse innovation activities, contributing to our club's achievement of 1st place in competitive club contests

Volunteer Experience

◆ **Mozilla Community Space Taipei** **01/2020-Present**

- Helped the Common Voice project establish a public voice dataset for training voice recognition-related tools
- Contributed to expanding and validating the Taiwanese language dataset and aided in identifying program errors and resolving user issues

Honors & Awards

- Valedictorian, NTUST **2023**
- Outstanding Youth, NTUST College of Electrical and Information Engineering **2023**
- Undergraduate Research Project Scholarship, MOST, Taiwan **07/2022-02/2023**
- Top 10 ranking, HOTAI Maas Data Hackathon Competition **2022**
- Finalist, 5G Leading Innovation Applications Competition **2020**

Additional Skills

◆ **Languages:** Mandarin Chinese (native), Taiwanese(proficient), English (advance), Japanese (intermediate)

◆ **Programming Language:** C++, C, Python, HTML, CSS, JavaScript/TypeScript, Golang, MySQL, PHP, Swift, Git

◆ **Cloud & Development Tools:** Azure, Kubernetes, Docker, GWP