

Wan-Xuan Zhu

+886-909-561-285 | wxn.zhu@gmail.com | [linkedin.com/in/Wan-Xuan-Zhu](https://www.linkedin.com/in/Wan-Xuan-Zhu) | Portfolio: youtube.com/@WanXuanZhu

EDUCATION

National Taiwan University

Sep. 2021 – Jun. 2023

M.S. in Graduate Institute of Networking and Multimedia

Taipei, Taiwan

- Coursework: Machine Learning, Digital Visual Effects, Interactive Computer Graphics, Computer Vision

Fu Jen Catholic University

Sep. 2013 – Jun. 2017

B.B.A. in Information Management

New Taipei City, Taiwan

MASTER THESIS

Pitch Detection System Based on Discrete Cosine Transform

Sep. 2021 – Jun. 2023

Advisors: Feipei Lai, Ph.D., Yiju Chen, M.S.

Taipei, Taiwan

- Applied digital signal processing techniques to achieve accurate pitch evaluation in audio signals.
- Collaborated with the National Symphony Orchestra to enhance system functionality and performance.
- Developed a user-friendly mobile app for iPhone and iPad.

EXPERIENCE

National Taiwan University, Medical Informatics Lab

Mar. 2021 – Sep. 2021

Research Assistant

Taipei, Taiwan

- Developed a Psychiatric Patient Monitoring System with Frontend, Backend, and Smartwatch Integration
 - * Eliminated 99% of manual monitoring workload for 1,767 patients at National Taiwan University Hospital by integrating the mobile app, wearable Garmin smartwatch detection, and server-side Django backend APIs.
- Contributed to Osteoarthritis Classification With Deep Learning Research
 - * Reduced the preprocessing workload by 98.6% by training a YOLOv4-based object detection model.
 - * Co-Author, "Successful Real-World Application of an Osteoarthritis Classification Deep-Learning Model Using 9,210 Knees—An Orthopedic Surgeon's View," J. Orthop. Res., 2022.

Colatour Travel Service Co., Ltd

Jan. 2018 – Mar. 2020

Software Engineer, Lead iOS Developer

Taipei, Taiwan

- Led a team of 3 engineers in developing the B2C travel e-commerce mobile app, with over 100 functional pages and 146,497 downloads.
- Developed an internal communication system mobile app for 1,191 company colleagues.
- Built a B2B mobile app featuring in-app webpage to support business processes.

PROJECTS

Mobile App, Audio Processing

Speech Emotion Recognition iOS App: Real-Time Audio Analysis with Flask Backend for Data Processing

Desktop App, Camera

Real-Time Gesture Recognition App: Detect and Track Hand and Motion Gestures to Control Models via Camera

Mobile App, Game

Virtual Reality Game Android App: Escape Room Adventure Game

Web Application, Game

Online Game for Pet Adoption, Training, and PvP Battles

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PROFESSIONAL SKILLS

Languages: C++, Swift, Python, Java, JavaScript, HTML, CSS

Tools and Libraries: Git, Slack, Django, Flask, Firebase, Google Cloud Platform