

# Wan-Xuan Zhu

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

## EDUCATION

<b>National Taiwan University</b> <i>M.S. in Graduate Institute of Networking and Multimedia</i>	Sep. 2021 – Jun. 2023 <i>Taipei, Taiwan</i>
<b>Fu Jen Catholic University</b> <i>B.B.A. in Information Management</i>	Sep. 2013 – Jun. 2017 <i>New Taipei City, Taiwan</i>

## MASTER THESIS

<b>Pitch Detection System Based on Discrete Cosine Transform</b> <i>Advisors: Feipei Lai, Ph.D., Yiju Chen, M.S.</i>	Sep. 2021 – Jun. 2023 <i>Taipei, Taiwan</i>
<ul style="list-style-type: none"><li>Applied audio digital signal processing techniques to achieve accurate pitch evaluation.</li><li>Collaborated with the National Symphony Orchestra to enhance mobile app's functionality and performance.</li></ul>	

## EXPERIENCE

<b>National Taiwan University, Medical Informatics Lab</b> <i>Research Assistant</i>	Mar. 2021 – Sep. 2021 <i>Taipei, Taiwan</i>
<ul style="list-style-type: none"><li>Developed a Psychiatric Patient Monitoring System with Frontend, Backend, and Smartwatch Integration<ul style="list-style-type: none"><li>Eliminated 99% of manual monitoring workload for 1,767 patients at NTUH by designing the system workflow, integrating the mobile app, wearable smartwatch detection, and server-side backend APIs.</li></ul></li><li>Contributed to research on Osteoarthritis Classification using Deep Learning<ul style="list-style-type: none"><li>Reduced the preprocessing workload by 98.6% by training a YOLOv4-based object detection model.</li></ul></li></ul>	
<b>Colatour Travel Service Co., Ltd</b> <i>Software Engineer, Lead iOS Developer</i>	Jan. 2018 – Mar. 2020 <i>Taipei, Taiwan</i>
<ul style="list-style-type: none"><li>Led a team of 3 engineers in developing the B2C e-commerce mobile app, with over 100 functional pages and 146,497 downloads.</li><li>Developed an internal communication system mobile app for 1,191 company colleagues.</li><li>Built a B2B mobile app featuring in-app webpage to support business processes.</li></ul>	

## PROJECTS

<b>Mobile App, Frontend, Backend</b> Speech Emotion Recognition iOS App: Real-Time Audio Analysis with Flask Backend for Data Processing
<b>Desktop App</b> Real-Time Gesture Recognition App: Detect and Track Hand and Motion Gestures to Control Models via Camera
<b>Mobile App, Game, Frontend, Backend</b> Virtual Reality Game Android App: Escape Room Adventure Game
<b>Web Application, Game, Frontend, Backend</b> Online Game for Pet Adoption, Training, and PvP Battles
<b>Portfolio:</b> <a href="https://www.youtube.com/@WanXuanZhu">youtube.com/@WanXuanZhu</a>

## PUBLICATIONS

<b>Co-Author</b> , "Successful Real-World Application of an Osteoarthritis Classification Deep-Learning Model Using 9,210 Knees—An Orthopedic Surgeon's View", J. Orthop. Res., 2022
<b>Co-Author</b> , "Training a Deep Contextualized Language Model for International Classification of Diseases, 10th Revision Classification via Federated Learning: Model Development and Validation Study", JMIR Med Inform, 2022

## PROFESSIONAL SKILLS

<b>Languages:</b> C++, Swift, Python, Java, JavaScript, HTML, CSS
<b>Tools and Libraries:</b> Git, Bitbucket, Slack, Flask, Postman, Firebase, Google Cloud Platform