

# Chih Chuan Huang



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## RESEARCH INTEREST

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### Machine Learning

- *Test-time Preference Alignment, Machine Unlearning, Persona Alignment, Representative Learning*

### Multimedia

- *Digital Arts, AI-generated Content*

## EDUCATION

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### National Taiwan University

Taipei, Taiwan

- *M.S. in Computer Science, Graduate Institute of Networking and Multimedia*

2026-2028

- **Advisor:** Dr. Hsuan-Tien Lin

### National Tsing Hua University

Hsinchu, Taiwan

- *B.B.A., College of Technology Management*

2021-2026

- **Program:** Interdisciplinary in Computer Science and Quantitative Finance

## RESEARCH AND INDUSTRY EXPERIENCE

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### Immersive Graphics and Visual Intelligence Lab, NTHU

Hsinchu, Taiwan

- *Undergraduate Researcher*

2023-2026

- **Advisor:** Dr. Min-Chun Hu & Dr. Hung-Kuo Chu

### Innovedus Inc.

Remote

- *AI Software Engineer Intern*

2024-2025

- Investigated quantization and pruning strategies to reduce model size while preserving accuracy
- Architected KNEO X & Cluster: scalable platforms for edge-AI and education

## PEER-REVIEWED CONFERENCE PUBLICATIONS

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(\* denotes equal contribution)

- [C1] Tai-Chen Tsai, **Chih-Chuan Huang**, Shun-Han Chang, Cheng-Yin Hsu, Hsin-Ying Lee, Kai-Hsiang Wen, Tse-Yu Pan, Min-Chun Hu, “PerformaVis: Real-Time Affective Music Visualization Driven by Pianist’s Bodily Expressions”. In *Adjunct Proceedings of the 37th Annual ACM Symposium on User Interface Software and Technology (UIST ’25)*
- [C2] 蔡岱臻, **黃稚筌**, 許程胤, 張舜涵, 李妍穎, 溫凱翔, 潘則佑, 胡敏君, “結合肢體與音訊特徵之個人化鋼琴演奏視覺系統設計”. In *The 11th Annual Conference of Taiwan Association of Computer Human Interaction Poster (TAICHI ’25)*
- [C3] Alfred Lan, Tai-Chen Tsai, **Chih-Chuan Huang**, Pu Ching, Tse-Yu Pan, Min-Chun Hu, “ImmerseSketch: Transforming Creative Prompts into Vivid 3D Environments in VR”. In *ACM Special Interest Group on Computer Graphics and Interactive Techniques 2024 Posters (SIGGRAPH ’24)*

## TEACHING EXPERIENCE

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### Teaching Assistant, National Tsing Hua University

Hsinchu, Taiwan

- *Hold lab discussion and office hour weekly, design and grade assignments, projects and exams.*

- **Computer Vision Practice with Deep Learning:** A graduate-level course in the [TAICA](#) CV Program. Fall 2025

- **Introduction to Programming:** A core course in the [TAICA](#) Applied AI Exploration Program. Fall 2025

- **Software Studio:** An undergraduate-level course in the CS core required. Spring 2025

### Workshop Instructor, Innovedus & Kneron

Taiwan

- *Hold workshop discussion, and instruct 30+ students on AI core technologies*

- **人機進化創新時代:** An hand-on AI workshop for [Leadership Development Program at NTHU](#)

Dec. 2024

## PROJECTS

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- BitoGuard** **Taipei**  
2026
  - AWS, Python, Git, Typescript, FastAPI, Docker, Machine Learning*
    - Engineered 60 features, and a 3-layer Leave-One-Out (LOO) toxicity scoring mechanism and graph-based features
    - Trained a LGBM model utilizing Focal Loss to handle severe class imbalance (3.5%), achieving F1 score 0.7
- XMEN: A Recurrent Dueling DQN for Minecraft Zombie Combat** **Taipei**  
2026
  - Python, Reinforcement Learning,*
    - Designed a multi-modal Dueling DRQN agent fusing CNN visual features with structured spatial vectors via LSTM
    - Achieved 68x kill rate and 4x survival gains over visual-only DQN baselines in Project Malmo
- Face Recognition Attendance System** **Taipei**  
2025
  - Python, Pytorch, ONNX, Git, Kneron Toolchain, NPU*
    - Implemented face recognition pipeline (MTCNN detector + ResNet embeddings) for real-time authentication
    - Automated data management with NAS logging and designed reporting module for usage insights
- Voice Recognition Using ResNet18** **Taipei**  
2024
  - Python, PyTorch, ONNX, Git, Kneron Toolchain, NPU*
    - Replaced transformer models with MFCC-based pipeline for unsupported hardware
    - Adapted ResNet18 for speech command recognition under resource limits.
- Boxing Information System** **Hsinchu**  
2023-2024
  - React.js, Git, Figma*
    - Created an information system to optimize data collection and integration for school boxing teams
    - Enabled data analysis and export contest features for coaches and athletes

## HONORS AND AWARDS

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- First Prize, Agent for Truth: AI Anti-Fraud Hackathon** **Taipei**  
2026
  - Awarded 1st prize for developing an AWS-deployed AI system that detects cryptocurrency mule accounts for BitoPro*
- CTM International Academic Engagement Scholarship** **Hsinchu**  
2025
  - Selected recipient supporting attendance at UIST 2025*

## LEADERSHIP AND EXTRACURRICULAR ACTIVITIES

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- Guided Generation Group** **Remote**  
2025
  - Member*
- NTHU Windband** **Hsinchu**  
2021-2023
  - French Horn Player*
- HSNU Alumni Wind Band** **Taipei**  
2021-2025
  - French Horn Player, Group Leader*

## SKILLS

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- Programming**
  - Python, C/C++, TypeScript, JavaScript, HTML/CSS, Rust*
- AI/ML**
  - PyTorch, TensorFlow, Hugging Face, OpenCV, Scikit-learn, Pandas, NumPy*
- Tools & Infrastructure**
  - React.js, Next.js, FastAPI, AWS, Google firebase, Docker, Git, Linux, Unity, L<sup>A</sup>T<sub>E</sub>X*