Chung-Han Liang

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Education

National Taiwan University — Taiwan
MS. Computer Science — *Sep 2020 – Jun 2023*

National Central University — Taiwan
B. Computer Science — *Sep 2015 – Jul 2020*

Experience

Software Engineer — April 2024 – Now
Expedera — *Full time*

- Optimize NN models for custom NPU using TVM. Improve performance on chip and accuracy after quantization.
- Collaborate with RTL designer to debug functional and timing failure.

Substitute military service — Nov 2023 – Feb 2024
National Fire Agency, Rescue Command Center — *Full time*

- Manage the daily exchange of official documents between offices

Research assistant — May 2020 – Jul 2023
Academia Sinica, Institute of information science — *Remote, part-time intern*

- Research on health data cleaning and preprocessing by optimization methods
- Preprocess ECG data into HRV features for futher analysis

Publications

FingerPuppet: Finger-Walking Performance-based Puppetry for Human Avatar — Jun 2023
with Prof Chen, B. Y. and Prof Huang, D. Y. — *NTU, Taiwan*

- Explore user preferred finger-walking gestures for virtual humanoid character manipulation
- Proposed a motion retargeting method that is capable to transfer a finger-walking motion to full-body motion under little amount of time. (less than 0.035 s)

Grouped data with survey revision — Jan 2023
with Prof Wang, D. W. and prof Pan, M. L. — *AS and NYCU, Taiwan*

- Aim to solve the inconsistency between self-report survey response data, and make subsequent analysis result reasonable
- Stochastic process is employed to model the inconsistencies in grouped data. The corresponding stochastic matrices are computed through the solution of a quadratic programming problem, and they are utilized for removing specific interference factors

Diagnostic and Rehabilitation System for Alzheimer's Disease Based on Virtual Reality Technology in Rehabilitation Rooms — May 2019
with Prof Eric Hsiao-Kuang Wu and prof S. Yeh — *NCU, Taiwan*

- Implement rehabilitation VR games based on clinical scales for Alzheimer's Disease by Unity
- Visualize signal from wearable ECG device on Unity application

Skills

Programming Languages (used in projects): Python, C#(Unity)
Programming Languages (used before): Matlab, C/C++, R
Languages: Chinese, English
Developer Tools: Jupyter Notebooks, Git, VS, VS Code