

WEI-CHENG TSENG

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EDUCATION

National Tsing Hua University (NTHU)

MS of Electrical Engineering

Sept. 2019 - current

advised by **Prof. Min Sun**

National Tsing Hua University (NTHU)

BS of Electrical Engineering

Sept. 2015 - June 2019

Overall GPA: 4.17/4.30, **Rank: Top 3% (3rd/109)**

University of California, Berkeley

Summer Session

July. 2017 - Aug 2017

PUBLICATIONS

Wei-Cheng Tseng, Hung-ju Liao, Yen-Chen Lin, Min Sun, "CLA-NeRF: Category-Level Articulated Neural Radiance Field", *under review*

Wei-Cheng Tseng, Da-Cheng Juan, Wei Wei, Min Sun, "Meta-CPR: Generalize to Unseen Large Number of Agent with Communication Pattern Recognition Module", *under review*

Wei-Cheng Tseng, Jin-Siang Lin, Yao-Min Feng, Min Sun, "Toward Robust Long Range Policy Transfer", *AAAI 2021*

Wei-Cheng Tseng, Jin-Siang Lin, Yao-Min Feng, Min Sun, "HAT: Hierarchical Alternative Training for Long Range Policy Transfer", *ICML 2020 workshop*

Wei-Cheng Tseng, Cheng-Kuan Chen, Tayden Li, Min Sun, Hsiao-Chun Huang, "Disentangling Experimental Noise from Fluorescent Microscopy Images with Multiple Cell Type", *NeurIPS 2019 workshop*

Wei-Cheng Tseng, Po-Han Chi, Jia-Hua Wu, Min Sun, "Leveraging Sequence Embedding and Convolutional Neural Network for Protein Function Prediction", *NeurIPS 2018 workshop*

RESEARCH EXPERIENCE

Disentangle Experimental Noise from Cell Profiling Image

June 2019 - Sep 2019

Undergraduate Research, advised by Prof. Min Sun and Prof. Hsiao-Chun Huang

- Developed learning the representation of cell profiling image that is immune to experimental noise using metric learning
- Ranked 8% in NeurIPS 2019 competition
- This work is accepted by NeurIPS 2019 workshop

Drug Discovery with Deep Learning

Mar 2019 - June 2019

Undergraduate Research, advised by Prof. Min Sun

- Designed drug molecules based on the existing drugs with reinforcement learning and sequence generation.

Master Soccer with Multi-Agent Reinforcement Learning

Mar 2019 - June 2019

Undergraduate Research

[report]

- Implemented baseline reinforcement learning algorithm, such as PPO, A2C, with PyTorch.
- Implemented multi-agent reinforcement learning algorithm, such as MADDPG, MAAC, with PyTorch.
- Analysed the result of conventional RL algorithm and multi-agent RL algorithm on unity ML-agnet environment.

Navigation with Reinforcement Learning and Neural Scene Representation

Nov 2018 - Jan 2019

Undergraduate Research

[report]

- Used Generative Query Network (GQN) to learn a representation of the layout of the environment.
- Combined the representation of GQN and reinforcement learning to make an agent to navigate to a specific position.

Protein Function Prediction with Deep Learning

Sep 2017 - Nov 2018

Undergraduate Research, advised by Prof. Min Sun

- Leveraged multi-level sequence embedding techniques on amino acid sequences to learning meaningful representation and predict amino acid sequence functionalities.
- This work is published as NeurIPS 2018 workshop paper.

SELECTED TEAM PROJECT

Mastering Minesweeper with AI

Sep 2018 - Jan 2019

Final Project of Artificial Intelligence class

- Encoded the state of game into Boolean expressions.
- Used model checking to select next action.

Smart Farming System

Sep 2017 - Jan 2018

Final Project of Introduction to Internet of Things class

- Built a sensor network to record the information of the farm with Mediatek LinkIt one
- Created a website to monitor the growth of bean sprouts

WORK EXPERIENCE

MediaTek

July 2018 - Oct 2018

Summer Intern

Hsinchu, Taiwan

- Integrated a varieties of sensors to collect dataset for radar related application.
- Developed a demonstration system to verification AI processor
- Developed a signal processing system to estimate the object distance

HONORS AND AWARDS

NovaTek Scholarship

Aug 2021

Awarded to students with outstanding research ability

NovaTek

Dr. Mei Yi-Chi Memorial Prize

June 2019

Highest honor for newly graduated students at NTHU.

NTHU

Academic Achievement Award

Mar 2016, Sep 2016, Sep 2017, Mar 2018, Sep 2018, Mar 2019

*Awarded to the **top 5 students** in the previous semester.*

NTHU

Pan Wen Yuan Foundation Scholarship

Dec 2018

*Only **one** student in electrical engineering department.*

Pan Wen Yuan Foundation

The Zhu Shun Yi He Qin Scholarship

Mar 2017

*Only **two** student in electrical engineering department.*

Summer Oversea Experience Scholarship

Mar 2016

*Only **ten** student in electrical engineering department.*

NTHUEE

TECHNICAL STRENGTHS

Computer Languages

C/C++, python, JavaScript/TypeScript, HTML, CSS, MATLAB

Hardware Development

FPGA, Arduinio, Verilog

EXTRA-CURRICULAR

Counselor of Freshmen

Sep 2017 - Jan 2018

- Helped students from other places to settle down

Activities Director of NTHU Guitar Club

Sep 2016 - Jun 2017

- Organized all the activities of guitar club