

Curriculum Vitae

Shih-Yang Su

Phone: +886-963-153-638

Email: at7788546@gmail.com

Address:

No. 31, Ln. 31, Zhongxiao St., Zhonghe Dist., New Taipei City 235, Taiwan

RESEARCH INTERESTS

- ❖ Reinforcement learning
 - Multi-agent settings
 - Exploration
 - Interactive RL
- ❖ Machine learning
 - Training efficiency
- ❖ Computer vision
 - Visual scene understanding

EDUCATION

2013.9 - 2017.6 **B.S. in Computer Science**

Dept. of Computer Science, National Tsing Hua University, Taiwan

- Rank: 3/120 (top 2.5%)
- GPA: 4.16/4.30 (overall), 4.25/4.30 (major)

EXPERIENCES

2017.1 - present **Full-time Research Assistant**

Dept. of Computer Science, National Tsing Hua University, Taiwan

- Reinforcement learning
- Multi-agent setting
- Gaming agent

Advisor: Prof. Chun-Yi Lee



2016.9 - 2017.1 **Teaching Assistant** - Hardware Laboratory., Fall 2016

Dept. of Computer Science, National Tsing Hua University, Taiwan

Advisor: Prof. Chun-Yi Lee

2016.7 - 2016.12 **Research Assistant**

Dept. of Computer Science, National Tsing Hua University, Taiwan

Project: Real-Time Object Detection on Embedded System

- Computer vision
- Object detection
- Deep learning

Advisor: Prof. Shang-Hong Lai

2016.7 - 2016.9 **Research Assistant**

Academia Sinica, Research Center for Information Technology Information

Project: Automatic Conversion of Pop Music into Chiptunes for 8-bit Pixel Art

- Machine learning
- Music information retrieval

Advisor: Prof. Yi-Hsuan Yang, Prof. Li Su



2015.7 - 2015.9 **Summer Internship** - Quality Assurance Team

Broadcom Corporation, Hsinchu, Taiwan

- Network product testing
- Performance tuning



RESEARCH PAPERS

Accepted Conference Paper

- **S.-Y. Su**, C.-K. Chiu, L. Su and Y.-H. Yang, “Automatic conversion of pop music into chiptunes for 8-bit Pixel Art,” in *Intl. Conf. Acoustics, Speech and Signal Processing (ICASSP)*, pp. 411-415. Mar. 2017 [[link](#)]
- Z.-W. Hong, **S.-Y. Su**, Y.-S. Chang, T.-Y. Shann and C.-Y. Lee, “DPIQN: Deep policy inference Q-network,” **submitted to** *Intl. Conf. Autonomous Agents and Multiagent Systems (AAMAS)*, 2018

AWARDS

- **ZyXEL Outstanding Student Scholarship**

Awarded to outstanding student in college of Electrical Engineering and Computer Science

- **Excellent Graduation Project Award**

Awarded to top 5 graduation projects in Dept. of Computer Science

- **Academic Achievement Awards** (5 times) (2013-2017)

Awarded to top 5% students in Dept. of Computer Science

- **Best Project Award**

In course Introduction to Multimedia

- **Best Poster Presentation Award**

In course Social Computing Application Design

RELATED COURSEWORK

- | | |
|-------------------------------------|------------------------------|
| • Large-Scale Machine Learning | • Data Structures |
| • Design and Analysis of Algorithms | • Introduction to Multimedia |
| • Music Information Retrieval | • Software Engineering |
| • Probability | • Linear Algebra |

TECHNICAL SKILLS

Programming Language: Python, C/C++, Objective-C, Java, MATLAB

Deep Learning Framework/Library: Keras, Tensorflow, Pytorch

SELECTED PROJECTS

1. **DPIQN: Deep Policy Inference Q-Network:** <https://github.com/williamd4112/infer-policy-feature>
Z. W. Hong, **S. Y. Su**, Y. S. Chang, T. Y. Shann and C. Y. Lee, “DPIQN: Deep Policy Inference Q-Network,” *currently under review for International Conference on Autonomous Agents and Multiagent Systems (AAMAS)*, 2018.
2. **Pop-to-8bit:** <https://github.com/LemonATsu/pop-to-8bit>
S. Y. Su, C. K. Chiu, L. Su and Y. H. Yang, “Automatic Conversion of Pop Music into Chiptunes for 8-bit Pixel Art” *In International Conference on Acoustics, Speech and Signal Processing (ICASSP)* 2017.
3. **Keras Image Captioning Model:** <https://github.com/LemonATsu/Keras-Image-Caption>
S. Y. Su, Y. R. Lin, S. D. Yang, *NTHU CS565500 final project, CIDErD score: 0.765, Rank 1 in course.*
4. **Bridge-Building:** <https://github.com/LemonATsu/Bridge-Building>
S.Y. Su, simple environment for training Reinforcement Learning agent.

REFERENCES

Professor Chun-Yi Lee

Dept. Computer Science, National Tsing Hua University

Phone: +886-3-5731308

Email: cylee@cs.nthu.edu.tw

Professor Shang-Hong Lai

Dept. Computer Science, National Tsing Hua University

Phone: +886-3-5731308

Email: lai@cs.nthu.edu.tw

Doctor Yi-Hsuan Yang

Academia Sinica, Research Center for IT Innovation

Phone: +886-2-2787-2300

Email: yang@citi.sinica.edu.tw

Doctor Li Su

Academia Sinica, Institute of Information Science

Phone: +886-2-2788-3799

Email: lisu@iis.sinica.edu.tw