PIN-JUNG CHEN

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RESEARCH INTERESTS

Natural Language Processing, Speech Processing, Computer Vision, Machine Learning & Deep Learning

EDUCATION

National Taiwan University (NTU), *Taipei, Taiwan* *Aug. 2013 - Jan. 2018*

- B.S. in Electrical Engineering
- GPA: 3.99/4.30 (Overall), 4.20/4.30 (Final 60)
- Relevant Courses: Machine Learning*, Artificial Intelligence*, Intelligent Conversational Bot*, The Design and Analysis of Algorithms*, Computer Architecture, Data Structure and Programming, Probability and Statistics, Linear Algebra (*graduate-level courses)

RESEARCH & WORK EXPERIENCES

Vision and Learning Lab *Feb. 2017 - Present*

Undergraduate Researcher; Advisor: Prof. Yu-Chiang Frank Wang *National Taiwan University*

- Proposed a novel framework for semi-supervised single-view 3D reconstruction.
- Generated compact graphical representation disentangled with respect to shape and pose.
- Served as external reviewers for refereed papers for AAAI 2018.

Speech Processing and Machine Learning Lab *Feb. 2016 - Jul. 2017*

Undergraduate Researcher; Advisor: Prof. Hung-Yi Lee *National Taiwan University*

- First to formulate the ASR errors in spoken dialog systems as a domain adaptation problem and proposed an original Dual-Encoder Sequence-to-Sequence model which outperformed the baseline by **45%**. [**1**]
- Developed a strong agent for a complex game, Bomberman, by combining supervised learning from human games, and reinforcement learning from self-play games. [**video**]

NVIDIA AI Technology Center (NVAITC) *Feb. 2017 - Jul. 2017*

Intern *Taipei, Taiwan*

- Worked on accelerating deep neural network training and inference on DGX-1.

TEACHING EXPERIENCES

Teaching Assistant, Machine Learning *Sep. 2017 - Present*

Instructor: Hung-Yi Lee *National Taiwan University*

- A graduate-level course with 400 people.
- Group leader of the final project on Speech Recognition in Taiwanese.

Teaching Assistant, Algorithm *Sep. 2017 - Present*

Instructor: Yu-Chiang Frank Wang *National Taiwan University*

- A compulsory course for undergraduates in the Department of Electrical Engineering at NTU.
- Provided short lectures and office hours for students.

HONORS & AWARDS

Google Student Grants for ASRU 2017, *Google Inc.* *Dec. 2017*

Outstanding Achievement (Semi-Finalist), *Innovate Asia Design Contest, Altera* *Aug. 2016*

Best Maker (1st out of 25 teams), *MakeNTU Hardware Hackathon* *May 2016*

Presidential Award, *National Taiwan University* *Spring 2014*

SELECTED PROJECTS

Intelligent Conversational Bot *Feb. 2017 - Jun. 2017*

- Built an intelligent neural dialogue system for music playing and recommendation which allows multi-modal interactions with users. **[project]**

Machine Learning *Sep. 2016 - Jan. 2017*

- Predicted tags of Stack Exchange questions on the unseen physics category by transfer learning methods.
- Ranked **8** in a class of 240 people and **top 25%** among 380 teams on Kaggle measured by mean F1-score.

Digital Circuit Design *Feb. 2016 - Aug. 2016*

- Designed a wireless auto-sensing robot to construct real-time maps of unknown environments. **[video]**
- Ranked **top 25** among 100+ teams in Altera Innovate Asia Design Contest 2016.

Data Analytics *Sep. 2015 - Jan. 2016*

- Crawled enormous amount of NBA data (over the past 35 years) from basketball-reference.com to analyze and visualize advanced NBA statistics.

EXTRACURRICULAR ACTIVITIES

International Volunteer (with ELIV), *Patlekhet, Nepal* *Jul. 2015*

- Cooperated with the villagers to reconstruct their home after the earthquake.
- Group leader of preparing teaching materials for local students.

SKILLS

Programming Languages	Python, C++, MATLAB, MySQL, SystemVerilog
Libraries/Tools	Tensorflow, PyTorch, Keras, LIBSVM, Git, LaTeX
Languages	Mandarin (Native), English (Proficient, TOEFL iBT®: 111/120)

SELECTED PUBLICATIONS

Conference Publications

[1] **Pin-Jung Chen**, I-Hung Hsu, Yi-Yao Huang, and Hung-Yi Lee. "Mitigating the Impact of Speech Recognition Errors on Chatbot using Sequence-to-Sequence Model", in IEEE Workshop on Automatic Speech Recognition and Understanding (ASRU 2017), Okinawa, Japan, December 16-20, 2017. **[link]**