

# PIN-JUNG CHEN

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## EDUCATION

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**Carnegie Mellon University, School of Computer Science**  
*Master of Computational Data Science (MCDS) | QPA: 3.65/4.33*

*Aug. 2018 - Dec. 2019*  
*Pittsburgh, PA*

- Coursework: Introduction to Machine Learning, Language & Statistics, Introduction to Computer Systems, Neural Networks for NLP, Large-Scale Multi-Media Analysis, Advanced Cloud Computing, Search Engines, Computer Vision

**National Taiwan University**  
*B.S. in Electrical Engineering | GPA: 3.99/4.3 (3.88/4.0)*

*Aug. 2013 - Jan. 2018*  
*Taipei, Taiwan*

- Honors & Awards: Dean's List (Spring 2014), Google Student Grants for ASRU 2017
- Coursework: Machine Learning, Artificial Intelligence, Intelligent Conversational Bot, The Design and Analysis of Algorithms, Introduction to Digital Speech Processing, Data Structure and Programming, Computer Architecture

## WORK EXPERIENCES

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**Advertising Cloud, Adobe Inc.**  
*ACTV Machine Learning Engineer Intern*

*May 2019 - Aug. 2019*  
*Emeryville, CA*

- Implemented Hierarchical Multiscale RNN, Temporal Convolutional Networks, and CNN-RNN for network prediction.
- Integrated models into Amazon SageMaker for large-scale distributed training and achieved 90% top-5 accuracy.

**National Taiwan University**  
*Teaching Assistant*

*Sep. 2017 - Jan. 2018*  
*Taipei, Taiwan*

- EE5184 Machine Learning, EE4033 Algorithm

## RESEARCH EXPERIENCES

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**Lemmatization and Morphological Analysis for Low-Resource Languages**  
*Graduate Researcher; Advisor: Prof. Graham Neubig*

*Feb. 2019 - May 2019*  
*Carnegie Mellon University*

- Combined attention char-LSTM with lookup table to improve the baseline accuracy by 10% on 100 languages.

**Pose-Aware 3D Reconstruction**  
*Undergraduate Researcher; Advisor: Prof. Yu-Chiang Frank Wang*

*Feb. 2017 - Jan. 2018*  
*National Taiwan University*

- Proposed a unique architecture for joint learning of 3D shape reconstruction and camera pose estimation from single-view 2D images, which outperformed state-of-the-art methods by 4% in IoU. [**ICASSP 2019**]

**Spoken Dialog System**  
*Undergraduate Researcher; Advisor: Prof. Hung-Yi Lee*

*Sep. 2016 - Jul. 2017*  
*National Taiwan University*

- Proposed a Dual-Encoder Sequence-to-Sequence model which outperformed baselines by 45% in BLEU. [**ASRU 2017**]

## SELECTED PROJECTS

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**Machine Translation of Noisy Text (MTNT)**, Neural Networks for NLP [PyTorch]

*Apr. 2019 - May 2019*

- Applied Transformer and back-translation on MTNT dataset, which improved state-of-the-art results by 1 BLEU.

**Iterative Machine Learning Training**, Advanced Cloud Computing [Apache Spark]

*Mar. 2019*

- Developed a distributed ML program to train logistic regression with 900 million features for 2 epochs in 40 minutes.

**Audiovisual Speech Recognition**, Introduction to Machine Learning [PyTorch, Scikit-Learn]

*Dec. 2018*

- Implemented various machine learning methods including BiLSTM and CapsNet for audiovisual speech recognition.
- Performed multi-task learning using subword information to achieve 97.52% accuracy on a large dataset (500k videos).

**MusicBot**, Intelligent Conversational Bot [Python, TensorFlow]

*Feb. 2017 - Jun. 2017*

- Built a neural dialog system for music playing and recommendation with Spotify API and Flask as backend.

## SKILLS

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**Programming Languages**

Python, C/C++, Java, SQL, MATLAB, Go

**Tools/Frameworks**

Tensorflow, PyTorch, Keras, Git, L<sup>A</sup>T<sub>E</sub>X, LIBSVM, MapReduce, AWS, Apache Spark

## PUBLICATIONS

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- [1] Yi-Lun Liao, Yao-Cheng Yang, Yuan-Fang Lin, **Pin-Jung Chen**, Chia-Wen Kuo, Wei-Chen Chiu, Yu-Chiang Frank Wang. "Learning Pose-Aware 3D Reconstruction via 2D-3D Self-Consistency", in IEEE International Conference on Acoustics, Speech, and Signal Processing (ICASSP 2019), Brighton, UK, May 12-17, 2019.
- [2] **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](#)]