

PU-CHIN CHEN

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EDUCATION

University of California, Los Angeles (UCLA)

Los Angeles, CA

M.S. in Computer Science

2016 - Dec. 2018 (expected)

- **GPA: 3.95/4.0**; GRE: Q170/170 (**Top 3%**)
- Research Area: Deep Learning in Natural Language Processing; Advisor: Kai-Wei Chang
- Coursework: Statistical Modeling and Vision, Learning from Text, Natural Language Processing, Data Mining, Data Science Principles, Database Systems, Programming Languages, Computer Security

National Taiwan University (NTU)

Taipei, Taiwan

B.S. in Computer Science

2011 - 2015

- National College Entrance Exam: Math: 100/100 (**Top 1%**); Physics: 99/100 (**Top 0.1%**)
- Coursework: Data Structures and Algorithms, Operating System, Computer Network, Machine Learning, Web Retrieval and Mining, Linear Algebra, Probability, Advanced Statistics

WORK EXPERIENCE

Machine Learning Intern

Taipei, Taiwan

KKBOX | Asia's Leading Music Streaming Service

Summer 2017

- Constructed deep learning pipeline with Python, MySQL and Shell Script; deployed to production using Docker
- Reduced **60%** of code size by refactoring music genre classification system from Theano to **Tensorflow/Keras**
- Extracted high-level properties from audio by convolutional neural network; built document embedding for lyrics adapted from word2vec model; ensembled features using wide-and-deep algorithm and achieved **90%** f1 score
- Developed software in an agile research team using Scrum methodology

Data Science Intern

Taipei, Taiwan

Far EasTone Telecommunications Co.

Winter 2017

- Optimized MySQL database with **300X** improvement from exponential to linear time (e.g. 1 week to 30 mins)
- Analyzed lifestyle from 7 million customers through time series clustering using discrete wavelet transform
- Created features from billions of daily machine-generated data; transformed hundreds of time series and spatial attributes to business interpretable variables using Python; expanded scalability of data pipeline

RESEARCH EXPERIENCE

Character Identification in Multiparty Dialogue with Neural Coreference Resolution | UCLA NLP Lab

Winter 2017

- Integrated end-to-end coreference resolution system with entity linking model using Tensorflow
- Designed mention embeddings with Bi-LSTM and attention mechanism for mention head detection; optimized coreference scores by maximizing antecedent likelihood formed with mention pairs
- Implemented agglomerative convolutional neural network to predict character entities of each mention cluster predicted from the coreference system; identified mentions as certain characters in TV show dialogues

Flying Drones with Hand-Gesture Recognition | NTU Human-Computer Interaction Lab

June 2014 - Feb. 2015

- Achieved 90%+ accuracy to recognize 8 gestures in real-time using K-nearest neighbor algorithm
- Built a body-controlled drone system within 36 hours using Java to control Kinect and AR.Drone
- Represented NTU in Stanford Treehacks Hackathon, attracting 2 companies for potential cooperation

LEADERSHIP EXPERIENCE

Vice President

Taipei, Taiwan

NTU Hackathon Organization

Mar. 2015 - Aug. 2015

- Led an organization with 9 departments of 68 members and 80 volunteers to host a 3-day hackathon for 850 nationwide students and industry professionals; achieved the biggest hackathon event in Taiwan
- Attained \$100,000 sponsorship through building collaborative partnership with 10 multinational enterprises

SKILLS & INTERESTS

Programming Languages: Java, Python, C/C++, MySQL, JavaScript, R

Tools: Tensorflow, Keras, PyTorch, scikit-learn, Git, Linux, Docker

Languages: Native in Mandarin; Fluent in English

Interests: Vim, Street Dance, Music