

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: 3.93/4.0**; GRE: Q170/170 (**Top 3%**)
- Research Area: Natural Language Processing; Advisor: Kai-Wei Chang
- Coursework: Database Systems, Data Mining, Data Science Principles, Natural Language Processing, Computer Security; Anticipated Courses: Software Engineering, Artificial Intelligence

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 the 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

- Identified mentions as certain characters in TV show dialogues; developed the system by integrating end-to-end coreference resolution system and entity linking model using Tensorflow
- Constructed 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

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 **Languages:** Native in Mandarin; Fluent in English

Tools: Tensorflow, Keras, scikit-learn, Git, Linux, Docker, NodeJS, ~~La~~TeX **Interests:** Vim, Street Dance, Music