Pu-Chin Chen

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Education

University of California, Los Angeles (UCLA)   **Los Angeles, CA**
M.S. in Computer Science   2017 - Mar. 2019 (expected)
- **GPA: 3.82/4.0**; GRE: Q170/170 (**Top 3%**)
- Research Area: Deep Learning in Natural Language Processing; Advisor: Kai-Wei Chang
- Coursework: Natural Language Processing, Statistical Modeling and Vision, Data Mining, Data Science Principles, Database Systems, Big Data Systems

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%**)
- Teaching Assistant: Data Structure and Algorithms
- Leadership: Vice President in HackNTU (Hackathon Organization)

Work Experience

PayPal   **San Jose, CA**
Software Engineering Intern   June 2018 - Sep. 2018
- Implemented auto-encoder based clustering with Deep Neural Network by **Tensorflow**, integrating models into **NodeJS** back-end; identified and visualized hidden structures of **15K+** servers running **180K+** virtual machines with d3.js
- Built autonomous cloud patching dashboard in PaaS production, managing **2500** applications across all PayPal sites
- Developed front-end in **JavaScript** and **ReactJS**; communicated with Tomcat Server in **Java** through RESTful APIs

KKBOX (Leading Music Streaming Service in Asia)   **Taipei, Taiwan**
Machine Learning Intern   May 2017 - Sep. 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** and 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 using Scrum methodology and JIRA system

FarEasTone (Top 3 Telecom Company in Taiwan)   **Taipei, Taiwan**
Data Science Intern   Jan. 2017 - Apr. 2017
- Optimized **MySQL** database with **300X** improvement from exponential to linear time (e.g. 1 week to 30 mins)
- Analyzed lifestyle from **7M** customers through time series clustering using discrete wavelet transform
- Created features from billions of daily machine-generated data; expanded scalability of data pipeline
- Transformed hundreds of time series and spatial attributes to business interpretable variables using **Python**

Research Experience

Attention Based Neural Grammar Correction | *UCLA NLP Lab*   Spring 2018
- Corrected grammatical error sentences by sequence-to-sequence neural machine translation with attention by **PyTorch**
- Substitued word2vec and Glove for deep contextualized word representations with language model (ELMo), capturing syntactic forms and semantic meanings; fortified feature representation with 5 grammar error tags

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
- Applied agglomerative convolutional neural network to predict character entities in TV show dialogues

Skills

Programming Languages: Python, JavaScript, Java, C/C++   **DBMS:** MySQL, MongoDB
Machine Learning: Tensorflow, PyTorch, scikit-learn, numpy, pandas   **Tools:** Vim, Git, Bash, Docker
Web Development: HTML/CSS, ReactJS, NodeJS   **Languages:** Native in Mandarin; fluent in English