

Puchin (Michael) Chen

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Education

University of California, Los Angeles (UCLA)

Los Angeles, CA

M.S. in Computer Science

2017 - Dec. 2019 (expected)

- **GPA: 3.8/4.0**; 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%**)
- 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**
- Substituted 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++

Machine Learning: Tensorflow, PyTorch, scikit-learn, numpy, pandas

Web Development: HTML/CSS, ReactJS, NodeJS

RDBMS: MySQL, MongoDB

Tools: Vim, Git, Bash, Docker

Languages: Native in Mandarin; fluent in English