

PU-CHIN CHEN

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EDUCATION

University of California, Los Angeles (UCLA)

Los Angeles, CA

M.S. in Computer Science

Sept. 2016-Present

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

National Taiwan University (NTU)

Taipei, Taiwan

B.S. in Computer Science

Sept. 2011-June 2015

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

WORK EXPERIENCE

Machine Learning Intern

Taipei, Taiwan

KKBOX

Summer 2017

- Refactored music genre prediction system from Theano to Tensorflow and reduced 60% of code size
- Implemented wide-and-deep model to ensemble music signals and lyrics features extracted by word2vec
- Constructed deep learning pipelines using Docker including lyric crawler and ETL tools

Data Science Intern

Taipei, Taiwan

Far EasTone Telecommunications Co.

Winter 2017

- Optimized MySQL database with **30000%** improvement from exponential to linear time (e.g. 1 week to 30 mins); expanded scalability of data wrangling system and paralleled tasks under Linux architecture
- Extracted features from **billions** of daily machine-generated data; transformed hundreds of time series and spatial attributes to business interpretable variables; built customer satisfaction forecasting model using Python sklearn
- Analyzed customer behavior and lifestyle from **7 million** users through trajectory mining and time series clustering using discrete wavelet transform; eliminated anomaly data using outlier detection

SELECTED PROJECTS

Movie Database System with Web Interface, *Database Systems*

UCLA

- Unified a variety of querying, browsing and data adding functionality as an easy-to-use Web Service
- Launched a movie database system using MySQL with PHP and Apache2 server handling 100,000+ data

Manipulating Drones by Gestures Recognition, *Bachelor Thesis Project*

Stanford

- Achieved 90%+ accuracy to recognize 8 gestures in real-time using K-nearest neighbor algorithm
- Created a body-controlled drone system within 36 hours using Java to control Kinect and AR.Drone; proposed speed-detection algorithms reducing 10-25% time delay caused by inertia forces
- Represented NTU in 2015 Stanford Treehacks Hackathon, attracting 2 companies for potential cooperation

Level Learning: Classify Tutorials by Difficulty, *Web Retrieval and Mining*

NTU

- Explored text features using TF-IDF concept from online learning tutorials crawled by Python
- Ranked 10 levels of documents difficulty for each query using semi-supervised learning

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 more than 800 nationwide students and industry professionals; achieved the biggest hackathon event in Taiwan
- Integrated cross-department communication and directed a technical team to build official websites, web game and bicycle tail light for marketing purpose; technologies included NodeJS, ReactJS, AngularJS, Dart and Arduino

SKILLS & INTERESTS

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

Tools: Tensorflow, Keras, Scikit-Learn, Docker, NodeJS, \LaTeX

Languages: Native in Mandarin; Fluent in English

Interests: Street Dance, Coffee, History