

# PU-CHIN CHEN

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## EDUCATION

### University of California, Los Angeles (UCLA)

*M.S. in Data Science Engineering*

Distance Education in the 1<sup>st</sup> year

Sept. 2016-June 2018

- Coursework: Database Systems, Data Mining; Anticipated Courses: Big Data Systems, Social Network Analysis, Pattern Recognition and Machine Learning, Convex Optimization, Bayesian Networks, Monte Carlo Methods for Optimization
- GPA: 4.0/4.0; GRE: Q170/170 (**Top 3%**)

### National Taiwan University (NTU)

*B.S. in Computer Science*

Taipei, Taiwan

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: Math: 100/100 (**Top 1%**); Physics: 99/100 (**Top 0.1%**)
- **Bachelor Thesis Project: Manipulating Drones by Gestures Recognition**
  - Represented NTU in 2015 Stanford Treehacks Hackathon; Created a body-controlled drone system using Java on Processing platform to control Kinect and AR.Drone within 36 hours, attracting 2 companies for potential cooperation.
  - Achieved 90%+ accuracy to recognize 8 gestures in real-time using K-nearest neighbor algorithm; Proposed speed-detection algorithms reducing 10-25% time delay caused by inertia forces.

## WORK EXPERIENCE

### Data Science Intern

*Far Eastone Telecommunications Co.*

Taipei, Taiwan

Winter 2017

- Designed an efficient algorithm converting raw data to feature datasets; Optimized MySQL performance from exponential time to linear time.
- Mined time series data and found customer behaviors.

### Database Administrator

*DiQi Inc. (Blockchain Technology Startup)*

Taipei, Taiwan

Oct. 2014-Feb. 2015

- Communicated with business partner and identified client needs, striking a balance between their requirements.
- Conducted in-depth research and analysis on consumers' behavior to design database schema.
- Constructed NoSQL server using MongoDB and monitored database performance on a daily basis; Established the network between Android client apps and server by socket programming using Java.

## 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. Sept. 2016-Oct. 2016
- Launched a movie database system using MySQL with PHP and Apache2 server handling 100,000+ data.

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

NTU

- Extracted text features using TF-IDF concept from online learning tutorials crawled by Python. Mar. 2014-June 2014
- Ranked 10 levels of documents difficulty for each query using semi-supervised learning.

### Handwriting Recognition System for Chinese Characters, *Machine Learning*

NTU

- Improved 10-15% accuracy by image pre-processing(e.g. trim redundant margin, normalize font size). Nov. 2013-Jan. 2014
- Experimented several models(e.g. SVM, linear regression) and got 82.1% accuracy using random forest.

### Majoraha: A Salary-Oriented Platform for College Major, *Summer School Course Project*

UC Berkeley

- Analyzed data crawled from 3 websites and presented the impact of college majors on future earnings. Summer 2013
- Visualized breakdown of salaries in relation to majors by bar chart, line chart, pie chart and bubble chart using D3.js.

## EXTRA CURRICULAR ACTIVITY

### Vice President

*NTU Hackathon Organization*

Taipei, Taiwan

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, AnuglarJS, Dart and Arduino.

## SKILLS & INTERESTS

**Proficient in:** Java, C/C++, JavaScript, SQL, Python, MongoDB  
**Languages:** Native in Mandarin; Fluent in English

**Familiar with:** PHP, NodeJS, ReactJS, UNIX shell script, Git,  $\LaTeX$   
**Interests:** Street Dance, Swing Dance, Chinese History