

**CONG PENG**740 Weyburn Terrace, APT #64, LA, CA, 90024 | (424)325-8496 | [pengcong@ucla.edu](mailto:pengcong@ucla.edu)**SKILLS:****Programming:** Java, Python, C++, PHP, knowledge of Linux / UNIX**Language:** English, Chinese (native)**EDUCATION:****University of California, Los Angeles**

Expected 2017.12

- Electrical Engineering, Signals & Systems

**Beijing University of Posts and Telecommunications (BUPT)**

2012.08 - 2016.07

- Communication Engineering

**Instituto Superior Tecnico, Lisboa, Portugal**

2015.02 - 2015.06

- Electrical and Computer Engineering

**EXPERIENCE:****EL ENGR 219: Large-Scale Data Mining: Models and Algorithms (Python)**

Present

- Regression Analysis: Basic implementation of Regression Models (Linear Regression, Ridge Regression, Logistic Regression, Polynomial Regression, etc.) on network backup and housing dataset.

[Future Topics]

- Unsupervised Methods for Data Modeling (K-means clustering, PCA, ICA, NCA, etc.)
- Supervised Classifiers: SVM, Neural Networks, etc.
- Simple applications: Online Advertisement, Recommendation Engines, Gene Networks, Speech modeling, etc.

**Advanced Algorithm Analysis on Wi-Fi Locating Based on Automatic Path Tracking (Java & Python)**

--Awarded as one of best papers for BUPT undergraduates

**Advisor: Ke Xu***Tsinghua University*

2015.11 - 2016.05

- Implemented K-means clustering algorithm to learn features of actual human trajectories.
- Summarized 3 important patterns along the human trajectories, set a criteria for further evaluation in localization and revised the localization trajectory with given pattern rules.
- Improved localization accuracy according to a well-defined localization algorithm by overall 10%.

**COM SCI 143: Relational Database Management Design (C++, SQL, PHP, HTML)**

2016.9 - 2016.12

- Built an open-ended Movie Database system allowing the user to search for the information of Movies and Actors through a Web interface using HTML and PHP programming.
- Bruinbase Design, implemented B+ tree index on Bruinbase which can efficiently retrieve the information from the database.

**Learning Bayesian Networks (Java)****Advisor: Bruno Alexandre Pires Henriques***Instituto Superior Tecnico*

2015.02 - 2015.06

- Implemented Greedy Hill Climbing algorithm and random restarts in Java to learn the experimental data from the training set.
- Discovered the best structures supported by 2 different scoring algorithms, log-likelihood and minimum description length.
- Computed the parameters of the structure and predicted exact value successfully.

**Navigation of Mobile Robot (MatLab)****Advisor: Joao Sequeira***Instituto Superior Tecnico*

2015.04 - 2015.06

- Analyzed the path condition carefully, and tested the sensitivity of ultrasound sensors.
- Designed one possible controlling algorithm based on 2 ultrasound sensors to navigate the robot to move around the offices without colliding with potential obstacles.

**Video Presentation:** <https://www.youtube.com/watch?v=vX6c2LI3kPY>**Weather parameters monitoring and sharing based on WeChat Common Platform (PHP)****Advisor: Zheng Hu***Beijing University of Posts and Telecommunications*

2014.03 - 2014.06

- Obtained data from the database collected by the sensors.
- Built up one WeChat platform which can interact with the subscribers by informing weather parameters collected by sensors, and displayed requested information on the screen in user-friendly way.
- Scored 99 of 100 in Course: Web Programming with an excellent presentation.