# Pengyu(Perry) Li

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### SUMMARY OF QUALIFICATIONS

Master of Computer Science student at Rice University, quick and avid learner, with diverse development experience both in industrial and research settings. Actively seeking a software engineer intern position in summer 2017.

#### **EDUCATION**

Rice University | Master of Computer Science

Dec 2017(Expected) | Houston, TX

Courses: Web Development, Graduate OOP, Algorithms, Data Mining and Statistical Learning.

Tsinghua University | B.S. in Mathematics & Physics

Jun 2016 | Beijing, China

GPA of Computer Science related courses: 3.8/4.0

Courses: Big Data System(Distributed System), Introduction to Machine Learning, Data Mining, Data Structure and Algorithms, Computer Architecture, Information Management, Computer Networks, Introduction to Artificial Intelligence.

#### TECHNICAL SKILLS

Languages: C, C#, C++, Java, Python, Javascript(React, Nodejs, Redux, D3, Angular), R, HTML/CSS

Databases: MySQL, Oracle, SQLite, MongoDB

Tools: Hadoop, LATEX, Unix/Linux

Misc.: Data Analysis, Statistical Inference, Machine Learning, Android Development

#### PROFESSIONAL EXPERIENCE

#### Microsoft Research Asia

Beijing, China

Intern, Machine Learning Group

Nov 2015 - Jul 2016

- Extracted data for specific NLP tasks from Bing snapshots. Deployed tasks on Microsoft's internal distributed system.
- Implemented neural language models (RNN, LSTM, etc.) with Theano framework. Built C# wrapper to integrate trained models which were original Python code into a Chinese healthcare chat robot project.
- Designed a framework to understand semantical information of short text, especially queries on a search engine, by incorporating external concept clusters, which improved by 7% on NDCG metric.
- Received the certificate of "Stars of Tomorrow", an award of excellence.

# School of Computing, National University of Singapore

Singapore

Intern, NLP & IR Group

Jun 2015 - Sep 2015

- Built a Chrome extension called Wikifier powered by Django to do entity-linking on discuss forum of MOOC platform.
- Analyzed Coursera courses schema and crawled them down from web by designed Scrapy crawling pipeline.
- Utilized context-based probability models and annotated data which was crawled from Coursera pages to disambiguate the meaning of terms in posts. Found patterns of terms indicating entities of courses schema such as *lecture*, *video*, *slides*, *etc*, then linked post terms with their real resources automatically.

# National Key Laboratory of Intelligence, Tsinghua University

Beijing, China

Undergraduate Research Assistant

Dec 2014 - Jun 2015

- Noted the limitations of state-of-the-art collaborative filtering based algorithms, and designed an ensemble learning framework to improve the ranking performance of recommender system by incorporating L2R models.
- Testing performance improved by 20% on MOVIES and IMDB datasets based on NDCG metric.

### SELECTED PROJECT EXPERIENCE

FTP Protocol Nov 2015

- Wrote a File Transfer Protocol(FTP) by C++, based on Socket, implementing functions(put, get, cd, ls, mkdir, etc.) required by IEEE RFC 959.
- Developed client and thread-safe server end for multi-users.

IR-light Apr 2015

- Developed a Chinese news retrieval prototype to resolve XML syntax and search from crawled HTML/XML files.
- Implemented Chinese word segmentation function and AVL tree(Java) to store content data.

## Campus Regulator

Aug 2014

- Developed a full-stack RESTful web app to handle daily regulation tasks on campus, including student management, class enrollment, news feed, email notification, etc.
- Wrote front-end based on Bootstrap and JQuery, and back-end based on Spring framework. Designed database schema to implement interaction between client and server . Created thread pool to handle high concurrency issues.