Wesley Wei Qian

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Education

University of Illinois at Urbana-Champaign | Champaign, IL **AUG 2017-MAY 2022**

Doctor of Philosophy in **Computer Science: Machine Learning & Bioinformatic**

Brandeis University | Waltham, MA **SEP 2013-MAY 2017**

Bachelor of Science in **Computer Science** and **Neuroscience**

GPA: **3.96** / 4.00 (Overall) **4.00** / 4.00 (CS)

Awards: **Phi Beta Kappa (Junior), Schiff Fellowship, Collaborative Research Grant, Summa Cum Laude**

Experience

GRADUATE RESEARCH ASSISTANT | CHAMPAIGN, IL — AUG. 2017-PRESENT

- Understanding and solving challenges in computational biology with machine learning
- Building sequential neural network (LSTM, ByteNet) to predict protein alignment profile, and using reinforcement learning framework to investigate protein folding problem

UBER SOFTWARE ENGINEERING INTERN | SAN FRANCISCO, CA — MAY. 2017-AUG. 2017

- Built data analytic pipeline from data acquisition in distributed setting (Spark, MapReduce, Hive), to data processing/feature analysis (Numpy, Matplotlib, Panda), and finally model training (Scikit-Learn)
- Experimented different machine learning models to predict couriers' states during food pickup for Uber Eats trip and identified key data quality problem causing underperformance in various models
- Built a Kernel Conditional Random Field library for time-series prediction problem drawing interest from multiple teams and won **the first prize** for Uber's first internal machine learning poster session

UNDERGRADUATE RESEARCH ASSISTANT | WALTHAM, MA — MAY. 2015-MAY. 2017

- Conducted interdisciplinary research in computer science, biology and computational linguistic
- Developed statistical machine learning model and engineer neural network to solve some challenging problems in protein structure and discourse parsing in linguistic

UNDERGRADUATE TEACHING ASSISTANT | WALTHAM, MA — SEP. 2014-MAY. 2017

- The role had differed from course to course, but duties consistently entailed office hours, grading, test grading, holding recitations, and review sessions
- The courses were: *Intro/Advanced Programing in Java*, *Data Structure*, *Structure and Interpretation of Computer Programs*, *Operating System*, and *Database Management System*

UBER SOFTWARE ENGINEERING INTERN | SAN FRANCISCO, CA — JUN. 2016-AUG. 2016

- Created and designed an internal tool for mobile developers to investigate UI test failures on Uber's continuous integration platform in full speed by aggregating and synchronizing logs and videos
- Reduced debugging time for mobile engineers by more than 50%
- Engineered in full stack with React.js front-end and Python/Go back-end

GOOGLE CODEU PARTICIPANT | MOUNTAIN VIEW, CA — MAR. 2015-AUG. 2015

- Participated CodeU, an exclusive dev program for high potential students to strengthen their skills
- Worked with three other participants to create a contact transfer Android application that transfers users' contact and social platform info with NFC or QR Code
- Presented the application at Google Tech Corner and won **the runner-up for Engineer's Choice**

Projects

SPATIAL PATTERN EXTRACTION WITH BIOLOGY APPLICATION **MAY. 2015-AUG. 2017**

- Implemented and optimized graph algorithms to extract pattern in attributed relational graphs
- Built pattern extracting algorithm for protein 3D structure mining and neuron morphology study
- Leveraged techniques in word embedding and generate feature vector for each amino acid
- Project was supported by **Jerome A. Schiff Fellowship**

DISCOURSE PARSING IN CHINESE MESSAGES **JAN. 2016-AUG. 2017**

- Crawled and preprocess text from social network for data analysis and model training
- Developed various neural network for sentence representation or sentence relation classification
- Project was supported by **Student/Faculty Collaborative Research Grant**

RESTAURANT REVENUE PREDICTION **APR. 2015**

- Predicted restaurant revenue for TFI, the company behind some of the world's most well-known brands including Burger King and competed with other data scientist on Kaggle
- Utilized linear regression, regression tree, fit ensemble, support vector machine package in MATLAB
- **Rank 38th (<2%) among 2257 teams from all over the world**
- Github project: https://github.com/WesleyyC/RestaurantRevenuePrediction

JEEVES: MOBILE VIRTUAL ASSISTANT **JUL. 2014-AUG. 2014**

- Created Jeeves, an Android voice-powered virtual assistant for everyday routines
- Focused on conversational dialogue and provided user a natural interaction with the app
- Crafted with JavaScript, HTML, CSS, news/weather/gmail API, Bootstrap, AngularJs and PhoneGap
- **Runner-Up of AVIOS Mobile Speech Application Contest 2015**
- Github project: https://github.com/arikalfus/Jeeves

PERFECT TIC-TAC-TOC PLAYER **MAY. 2015-SEP. 2015**

- Implemented a Tic-Tac-Toc game and a perfect player who will never loose
- Integrated the python software with Raspberry Pi and breadboard for an hardware game console
- Github project: https://github.com/WesleyyC/TicTacToe

FOR MORE

- **https://github.com/WesleyyC**

Courses

- Statistical Machine Learning
- Big Data Analysis
- Distributed Systems
- Operating System
- Database Management Systems
- Data Structure and Algorithm Design

Skills

- **Programming skills in** Java, Python, MATLAB , Go, JavaScript
- **Proficient with** TensorFlow, Hadoop, MapReduce, Spark, Hive, MongoDB, PSQL
- **Experience in** Big Data Analysis, Distributed System, Android Development, Statistical Machine Learning, Deep Learning, Computational Linguistic, Bioinformatic and Neuron Modeling
- **Enjoy** farmer's market, photograph, biking, golf, and equestrian