

# Wenzhe(Evelyn) Xu

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## CORE QUALIFICATIONS

**Overall Highlight:** Solid data science background with data engineer skill sets applied in industry

### Statistical Skill:

- Data manipulation: ETL (extract-transform-loading) data technique with large dataset (Impala 1.x)
- Modeling: machine learning (regression, classification, clustering), categorical data analysis, time series analysis, sampling, ANOVA analysis, A/B testing, dimension reduction, model selection

### Computer Skill:

- Programming: expertise in R (4+yr, dplyr, ggplot2, shiny), Python (1+yr, Scipy, numpy, pandas, scikit-learn), SQL (3+yr)
- Data engineering: Apache Impala 1.x, Apache Hadoop 2.x, Cloudera CDH 5.x, Apache Spark 1.x
- Software and system: SAS (Advanced Certified), SPSS, Looker, Linux (CentOS6.5), Microsoft Office, Map Reduce

### Communication and Presentation:

- Meeting with business colleagues and transfer the commercial goal into data-driven objective
- Quick response to the later-added requirement from business side
- Presentation of the modeling result and data insight by PPT and building interactive dashboard through Shiny

**Project Management:** Able to track each stage according to scheduled timeline for an independent project

## EDUCATION BACKGROUND

### University of Illinois at Urbana-Champaign

8/2013-5/2015

Master of Science in Statistics-Analytics | Major GPA: 3.96/4.0

### Tianjin University of Finance and Economics, Tianjin, China

9/2009-6/2013

Bachelor of Science in Statistics | Overall GPA: 3.75/4.0 | Major GPA: 4.0/4.0

## PROFESSIONAL EXPERIENCE

### Data Scientist Intern, MasterCard Inc. San Carlos, CA

6/2015 - 12/2015 (expected)

**Independently designed the automatic anomalies detection system for business metrics time series data**

- Researched on anomaly detection algorithm and finally choose the S-H-ESD test from Twitter as basic logic
- Read package source code of R and re-organized the logic and input to fit the business metrics data application scenario, with integrating special requirement from business and engineer staff's execution
- Used Impala/SQL for ETL the data from production, compiled the R code into mapper and reducer function in Python with each group id as mapper key, and set up the map-reduce data pipeline job on Oozie
- Build PPT for presentation and interactive dashboard from Shiny for collecting feedback of the algorithm to team and quick response to additional need from business and engineer colleagues

### Collaborative tasks from other projects

- Helped to write mapper and reducer function on word count for merchant classification based on transaction records
- Build Hadoop cluster of 12 nodes including tuning critical parameters, and was responsible for the maintenance on memory usage and related package installation under CentOS6.5 Linux environment
- Participated in the Cloudera training on Apache Spark

### Tech-Sale Analytics Intern, Anheuser-Busch Inbev, Champaign, IL

5/2014 -5/2015

**Customer profiling with social media data source and internal wholesaler database**

- Learned the original algorithm and created advanced string cleaning step for Foursquare/Yelp database
- Improved the whole workflow by adding lat/lon information as well as innovative filters to increase mapping accuracy
- Wrote and integrated all steps in pipelined R code for future usage and cooperated with 3<sup>rd</sup> party to build dashboard
- Overcame the challenges of handling Asian languages and popularized the customer profiling project to global market
- Mentored new interns for taking over the customer profiling work flow

### Quantitative exploration experiment projects (Ad Hoc)

- Predicted volume for each POC through logistic models and learning algorithms, identified the influencing POCs
- Used regression tree to predict the number of pipe needed by the target volume for Belgium on-premise market
- Transfer the data analysis result to commercial insight and presented to business managers on a regular basis