Zihua WU

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Education

University of Michigan	**Sep 2015 - Dec 2016**

- Master of Science in Quantitative Finance and Risk Management
- Core Courses: Machine Learning, Natural Language Processing, Risk Management, Applied Statistics, Stochastic Finance

Zhejiang University	**Sep 2011 - Jul 2015**

- Bachelor of Science in Computational Mathematics
- Core Courses: Data Structure, Database Management, C# Programming, Mathematical Analysis, Numerical Analysis

Work Experience

Data Scientist, Mint Servicing Inc.	**Apr 2017 - Present**

- Maintained database including privilege management, pulling data, writing script on AWS to retrieve data through API and FTP Secure, executed daily check to ensure data integrity and accuracy, being familiar with ETL process
- Performed loan history analysis, visualized them, built up KPI to monitor the whole business, and adjust leads purchasing strategy based on above results, which increase conversion rate by 30%
- Created monthly retention marketing campaign which improve customer retention rate by 15%
- Built prediction model to identify high-risk customers and potential fraudsters (Applying decision tree to get thresholds for significant attributes which are used to modify leads purchase rules and filter out an additional 25% of the high-risk leads)

Algorithm Engineer, Shenzhen AXM Technology Co.,Ltd	**Jun 2016 - Sep 2016**

- Acquired aviation-related data by web scraping with Scrapy, Beautifulsoup and Requests library, cleaned and organized acquired data into MongoDB for natural language processing
- Built up corpus for Q&A system of Pepper robots serving Shenzhen Airport, used neural network to help robots identify questions and find the most appropriate answers corresponding to passengers' questions
- Realized synchronization of humanoid robots' choreography according to Contraction theory and quorum sensing, using Python and *Naoqi* platform

Software Developer, Zhejiang Math Association	**Feb 2015 - Apr 2015**

- Developed membership management and library management system using C#, including features like administration, login, verification code, adding and updating member portfolio, and mail system
- Maintained database of above systems in SQL (SQL Server), building up constraints between tables, got basic summary statistics using Excel pivot table
- Designed the front-end and interaction of the systems with HTML and JavaScript

Grader (Machine Learning), EECS, University of Michigan	**Sep 2016 – Dec 2016**

- Checked and graded assignments, quizzes and in-class exercises, paying close attention and returning to professor on time

Additional Projects

- Designed database for social network, querying with JBDC, setting up logging and recovering system with ACID
- Set up dependency parse recursive neural network to implement Deep Learning for Question Answering system
- Analyzed and improved translation model including IBM1 and IBM2, built a new one with Berkeley Aligner

Skills

- **Coding:** Python, R, SQL (proficient), MATLAB, C#, Shell Script, Html and JavaScript, Linux, AWS
- **Python:** Skilled at Numpy, Scipy, Pandas, BeautifulSoup, Scikit-learn, Seaborn
- **R:** 3 years of experience with Statistics, Data Visualization and Data Mining tools
- **Database:** MongoDB, MySQL, SQL Server, JDBC, B+ tree, Excel, ETL Process
- **Statistics Models:** Hypothesis Testing, Regression, Analysis of Variance, Mixed Model, Multivariate Analysis, Categorical Data Analysis, Predictive Modeling, Time Series, Design of Experiment
- **Machine Learning:** Supervised Learning (Regression, Decision Tree, Neural Networks, KNN, SVM, Naïve Bayes Classifiers), Unsupervised Learning (Clustering, PCA, Matrix Factorization), etc.
- **Web Scraping:** Scrapy, Requests, BeautifulSoup, XML, Regular Expression, Data Cleaning