
QUALIFICATIONS SUMMARY

I am highly analytical and versatile professional with over five years of consumer lending industry experience in development of data products with large datasets. I have strong background in using statistics and machine learning approaches to solve real-world problems.

- ❖ Bachelor dual degrees in engineering and computer science, Ph.D. in engineering, master in statistics
- ❖ Advanced knowledge and hand-on experience in statistical methods and data mining algorithms: text mining, logistical regression, SVM, random forest, ANNs, Gradient Boosting Machine, CART, PCA, Naïve Bayes, clustering.
- ❖ Proficient in Python (Pandas, NLTK, GENSIM, Beautiful Soup, Scikit-Learn), R, SQL (Teradata, MS SQL Server, SQLite), Tableau, SAS, UNIX Shell, Cloudera Hadoop, Spark, PHP.
- ❖ Extensive hands-on experience in developing data products using Python and Tableau for 300+ internal customers.
- ❖ Experienced in building data driven solutions for consumer lending: model monitoring and development support, underwriting, credit policy, valuation and compliance.
- ❖ Fast learner with strong self-motivation, hardworking, creative; authored/co-authored 7 publications and 2 patents.

PROFESSIONAL EXPERIENCE

PRINCIPAL DATA ANALYST

Capital One Home Equity, Plano, TX

Aug 2016–Present

- ☑ Built algorithm for capacity optimization and new loan assignment using linear optimization; built end-to-end data engine and web-based user interface for automated document review using text analytics and text mining techniques
- ☑ Lead a team of 3 data analysts for origination compliance and Lean Six Sigma improvement; build data ecosystem for real-time operation workflow management.
- ☑ Certified Scrum Product Owner; Work with software engineer group for building the new generation of loan fulfillment UI as SME and business logic provider; work with data engineer group to build Cassandra API for workflow management; solve any data related problems and monitor data accuracy.

Awards: Capital One Circle of Excellence (nominated), Q3 2017

Financial Service Mark of Distinction, Q1 2017

Home Equity HEART award, March 2017

Capital One Circle of Excellence, Q3 2016

SENIOR DATA ANALYST

Capital One Home Loan Operation, Plano, TX

Feb 2014-July 2016

- ☑ Supported a full spectrum of operation data needs: underwriting, loan processing, quality assurance, customer experience, compliance and audit (HMDA, HPML, Flood etc.).
- ☑ Designed and developed data products and efficiency tools (Python and Tableau) for 200+ loan processors, underwriters and team leaders; helped to improve underwriting SLA adherence from 73% to 90% in three months; helped home equity to double funded loans per FTE in 6 months.
- ☑ Managed and coordinated the complete life cycle of data products – from project initiation, empathic design, prototype development, floor test, feedback collection, result monitoring and agile improvement.

Awards: Financial Service Mark of Distinction, Q1 2016

First Place, Capital One 2015 Data Community All Hands Expo Competition, Oct 2015

DATA ANALYST CONSULTANT/ SENIOR DATA ANALYST

Capital One Home Loan Marketing & Analysis, Plano, TX

Jan 2012–Feb 2014

- ☑ Lead data analyst to support Home Loan Marketing & Analysis business and statistician teams for loan origination, pricing, credit policy and valuation
- ☑ Worked with statisticians to design and build the data wrangling process to consolidate credit, origination, and loan performance data from different LOBs and systems into one database for new application model building.
- ☑ Debugged, streamlined and redesigned the model monitoring and quality control process for home equity account level valuation (ALV) models.
- ☑ Created standardized scripts to build data warehouse for analysis purpose using SAS/SQL in UNIX environment with Teradata as database; Build ad hoc reports for loan fulfillment process monitoring using SQL and Business Objects.

Awards: Home Loan Circle of Excellence, Q1 2014

Financial Service Statistician Team STAR Award

PH.D. RESEARCH ASSISTANT/ASSOCIATE

Iowa State University, Ames, IA

Aug 2006- Dec 2011

- ☑ Applied statistical learning and data mining methodologies to engineering materials design
- ☑ Modeled the nonlinear composition-processing-property relationships of alloys using recursive partitioning, principal component analysis (PCA), artificial neural network(ANN), and genetic algorithm (GA)
- ☑ Performed 3-way ANOVA statistical analysis on nanoindentation hardness data of metal thin film
- ☑ Used statistical software and languages: Matlab, JMP, SAS, R

Publications and Patent: <https://scholar.google.com/citations?user=mZ0UPNEAAAAJ&hl=en>

EDUCATION

Master in Statistics: Iowa State University

Ph.D. in Engineering: Iowa State University, Ames, IA

Bachelor in Engineering and Computer Science (dual degree): Xi'an Jiaotong University (XJTU), Xi'an, China

RELEVANT COURSES

Iowa State University

STAT500 Statistical Methods, STAT501 Multivariate Statistical Methods, STAT510 Statistical Methods II – Linear Models, STAT520 Statistical Methods III, STAT531 Quality Control and Engineering Statistics, STAT542 Probability Theory, STAT543 Statistical Inference, STAT579 Statistical Computing with R, STAT511 Time Series Analysis, IE583 Knowledge discovery and data mining, CS573 Machine Learning

Xi'an Jiaotong University, China

Fundamental of Database Systems, Data Structures and Algorithms, Fundamental of Operating Architecture, Principles of Computer Network