YAN FENG

US Citizen

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QUALIFICATIONS

- Skilled in script languages and data analytic tools, R, Python, SQL, shell script, *etc.*
- Extensive AWS experience in production support and maintenance
- Financial model implementation and validation
- Predictive model with machine learning, regression and classification models, linear regression with single or multiple variables, logistic regression, KNN, tree-based models, unsupervised learning, dimension reduction, k-means clustering, *etc*.
- In-depth knowledge in statistics, hypothesis testing, ANOVA, new experimental design, t-test, *etc*.
- Advanced interactive data visualization, ggplot2, matplotlib, seaborn, plotly, leaflet, *etc*.
- Development of data product with R markdown and shiny
- Experience with version control solutions, git and github
- Solid background in writing and reviewing progress reports and presentations
- Multi-disciplinary working environment and giving instructions to junior researchers

PROJECTS

- Implemented Common Cash Flow Application financial model on AWS cloud to save both model calculation time and money spent in server maintenance extensively
- Optimized a full book single family aggregation model with 18 million mortgage loans using AWS spectrum saving 90% of running time
- Packed economic data using forecast home price index and interest rate
- Constructed tree and random forest models to predict whether a loan is granted and a granted loan is repaid, and developed a web application with shiny
- Developed a financial cash flow model to calculate the rate of return of a rental property with consideration of all situations; visualized yearly cash flow in a web application with shiny
- Built an n-gram model to predict the next word when typing; developed a web application with shiny

CERTIFICATION

- AWS Certified Solutions Architect – Associate by Amazon AWS

WORKING EXPERIENCE

Financial Engineer

Fannie Mae 2019-present

- Implemented and Common Cash Flow Application financial model on AWS cloud and maintained the service to ensure the smooth transition from on-prem server to AWS
- Validated the financial models on AWS cloud with comprehensive regression tests
- Developed a novel financial report with 12 output files with only 1 batch run using AWS Redshift

Research Scientist

USDA 2014-2018

- Analyzed hundreds of complex natural products and derived a pattern to select active green pesticides, resulting in 3 US patents
- Lead in a multi-disciplinary environment and coordinated researchers from different areas

EDUCATION

- **Data Science Specialization**, Johns Hopkins University 2017
- **Ph. D.** in Chemistry, University of Minnesota 2011
- **B. S.** University of Science and Technology of China 2005