Tong Xu, CFA, FRM

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SUMMARY

Data Scientist with 8 years of experience in Financial Services, using machine learning and statistical methods in Python, R, SQL to solve business problems. Detail oriented, strategic thinker, excellent communicator.

SKILLS

Languages:	Python (scipy, numpy, pandas, scikit-learn, scrapy, selenium, seaborn, tensorflow, keras, fbprophet) R (dplyr, ggplot2, shiny, plotly, leaflet, wordcloud, DT, caret, Rmarkdown, forecast)
Data Science:	Linear/Logistics Regression | Random Forest | Boosting | Naive Bayes | SVM | PCA | Web scraping | NLP | Sentiment & Network Analysis | Cluster Analysis | Time Series Analysis | Neural Networks
Tool:	Jupyter Notebook | SQL | MongoDB | Excel/VBA | Visio | AWS | Spark | Hadoop | Github | Sisense
Financial Analysis:	Bloomberg | FactSet | Captial IQ

PROFESSIONAL EXPERIENCE

Moody's Investors Service, New York, London — **Sept 2015 - Present**

Financial Engineer (June 2017 – Present)

Quantitative Analyst (Sept 2015 – May 2017)

- Lead analyst in calibrating credit rating scorecards for fundamental methodologies, including Corporate Finance, Public and Private Infrastructure Finance and Financial institutions. Manage data refining, outlier analysis and impact analysis processes in a timely manner, provide analytical leadership on developing quantitative tools.
- Use SQL and R to gather data from different data sources and apply statistical analysis methods to identify key risk factors and interpret trends in different sectors. Build a median reporting web tool using R shiny to make interactive visualizations for sector and peer comparison as well as automating reports generation process.
- Program in Python, C++ and Excel VBA to optimize ranges and weights for credit scorecards.
- Create cash flow projection model and waterfall analysis reports for public finance using Excel VBA.
- Build dashboard for public finance issuer analysis using Sisense and SQL
- Attend industry outlook meetings and credit committees to help facilitate analyst understand updates in credit scorecards.
- Apply machine learning, reinforcement learning in Python to monitor rating actions and conduct defaulter researches.
- Attended seminars and received training about non-relational database from AWS database workshop and data analytics workshop

NYC Data Science Academy — **Jul 2018 – Oct 2018**

Data Science Fellow

- Machine learning: Developed housing price model using feature engineering, ensembling and stacking linear regression with lasso regularization and random forest with boosting methods.
- Visualization: Developed an interactive web application using R shiny to analyze and visualize sector analysis based on financials and price performance of S&P 500 stocks from 2012-2016.
- Capstone Project: Provide trend analysis for fashion jewelry using web scraping, machine learning models (clustering, regression analysis and NLP)

Moody's Shared Service, New York — **Aug 2011 - Aug 2015**

Business Analyst (June 2012 – Aug 2015)

Business Analyst – Consultant under Randstad Technologies (Aug 2011 – May 2012)

- Lead business analyst managing publishing rating methodologies and updating credit analytical tools for Moody's Financial Metrics application. Principal liaison with MD and SVP level business stakeholders to identify and improve process, manage risk, resolve accounting discrepancies between accounting regimes, and address regulatory concerns.
- Lead product manager to re-architect and create rating scorecard configuration tool to automate rating development and publishing processes. Wrote functional requirements, use cases and test cases.
- Lead as project manager in monthly releases. Developed project plans, applied agile methods, managed scope, providing support to resolve requirements conflicts or defects with enterprise architectures, QAs and developers.
- Renovated Insurance Financial Metrics Platform and related credit analytical tools for internal and external use.

Ashir Group, New York — **Feb 2010 - May 2011**

Financial Analyst (For a boutique investment banking consulting firm focused on Chinese companies)

- Pitched and engaged clients for IPOs and reverse mergers. Generated industry analysis of China-based, US-listed companies, evaluated business models, performed comparable and valuation analysis, completed pitch books for road shows.
- Constructed and maintained financial projection and valuation models, reviewed companies' quarterly and annual filing and performed accounting analyses; Conducted conference calls and meetings with industry experts, investors, attorneys, auditors, IP/PR companies and market makers; generated capital market reports with Capital IQ for clients.

EDUCATION

M.A. Economics, Tufts University, Medford, MA — **Sept 2007 - Aug 2009**

B.S. International Economics, Beihang University (BUAA), Beijing, China — **Sept 2003 - Jul 2007**

INTERESTS

Traveling, Skiing, Tennis, Basketball