

Tong Xu, CFA, FRM

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SUMMARY

Data Scientist with 8 years of experience 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) R (dplyr, ggplot2, shiny, plotly, leaflet, wordcloud, DT, caret, Rmarkdown)
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
Tools:	Jupyter Notebook SQL Excel/VBA Visio AWS Spark Hadoop Github
Financial Analysis:	Bloomberg FactSet Capital 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 developing credit rating scorecards for Corporate Finance, Public and Private Infrastructure Finance methodologies. Manage data refining, outlier analysis and impact analysis processes in a timely manner, provide analytical leadership on calibrating scorecards and improving quantitative tools.
- Develop R Shiny web application using SQL and R, automating statistical analysis processes and visualizing key risk factors trends for comparable sectors. Present innovative solutions using R for interactive visualization and reports generation.
- Program in Python, C++, Excel VBA to optimize ranges and weights for scorecards and provide ad-hoc analysis for quantitative tools.
- Attend credit rating committees and industry outlook meetings to help facilitate analyst understand updates in credit scorecards.
- Apply machine learning and econometric methods to predict rating actions and conduct defaulter researches.

NYC Data Science Academy

Jul 2018 - Oct 2018

Data Science Fellow

- Visualization: Developed an interactive web application using R Shiny to visualize sector trend analysis based on financials and price performance of S&P 500 stocks from 2012-2016.
- Machine learning: Developed housing price model using feature engineering, ensemble methods, stacking linear regression with lasso regularization and random forest with boosting methods.
- Capstone Project: Built trend recommender book 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.
- Wrote functional requirements and use cases for credit tools. Rearchitected and deployed tool to automate rating development and publishing process.
- 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, Basketball, Tennis