John Muller

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▷ I am a Computer Scientist(Ph.D.), Data Scientist, and Finance Quant with over 15 years of experience solving analytic problems in a variety of industries.

▷ I love understanding problems from the big picture to the details and working with clients and stakeholders to define and then execute on solutions that add value.

☐ Technical skills

- Python and it's ecosystem: notebooks, pandas, numpy, et cetera
- scikit learn, keras/tensoflow,and pytorch.
- Skill and experience with ML algorithms ranging from regression to ensemble methods to neural networks.

Experience

Bank of America   **Python developer**   **Nov. 2022 – present**

- Developing Python and SQL tools to give the bank a more flexible process for loading and managing sensitive data.

Enter The Data   **Data Scientist**   **2012 - present**

My own brand for Data Science and Computer Science consulting

- Estimation and analysis of customer retention across markets to promote winning strategies.
- Estimating the effects of weather on sales to optimize inventory around extreme events.
- K-means clustering of survey data to reveal natural groupings of the population.
- Estimating the value of marketing campaigns to optimize marketing spend.

Lowe's   **Data Scientist**   **Nov 2021 - Apr 2022**

- Coded a rules-based method for recommendations which was put into production.
- Built a graph ML method that can use product attributes as well as web traffic data. This was important because it addressed the issue of new products which have no history of view data.

PNC Bank   **Python Developer & Code Reviewer**   **Oct 2019 - Oct 2021**

- Helped avoid Regulatory Penalties by reviewing over 24 sets of Python and SQL code to ensure that the code meets the requirements and that the results are reproducible.
- Developed a Pandas dataframe profiling tool that produced an extensive summary of a dataframe saving time for all reviewers and money for the firm.

Acadian Asset Management   **Vice President & Analyst**   **Feb 2013 - Mar 2018**

- Designed and built a dashboard for Portfolio Managers to compare returns and exposures for sets of portfolios, allowing them to identify both anomalies and opportunities in their portfolio strategies.
- Implemented adding transaction costs into the attribution framework giving Portfolio Managers a better understanding of it's effects on returns. The work resulted in re-estimation of apriori transaction costs.
- Devised and implemented a method to estimate broker skill based on page rank. Knowledge of broker skill is critical in managing execution costs and impacts on alpha.

State Street Associates Vice President, Analyst and Visualization lead Aug 2007 - Feb 2012

State Street Associates is the research arm of State Street Corporation's trading business.
- Team leader for the group responsible for creating both the Fixed Income and Equity holdings indicators.
- Managed teams that developed and released 14 new Foreign Exchange and Equity flow indicators.
- Built a dashboard for the Securities Lending traders that unified their data and allowed for new kinds of comparison and analysis. Once complete it was put into use on the desk immediately.

Bank of America   Senior Vice President   Oct 2001 - Aug 2007

- Developed tools to analyze differences in rate on corporate bonds with the same rating to support a project on revising corporate loan hedging strategies.
- Analyzed loan-level cash flow data and built models to predict mortgage servicing profitability. Loan servicing fees are an important revenue stream for the bank.
- Extensive analysis on the effects of pricing policies on application volume for the mortgage pricing team.

Education and Activities
University Education

Degree: Doctor of Philosophy, Ph.D.
Major: Information and Computer Science
Institution: Georgia Institute of Technology

Degree: Bachelor of Science, B.S.
Major: Computer Science
Institution: University of Georgia

Continuing Education and related activities

- Artificial Intelligence Professional Program, Stanford University
  - Machine Learning, XCS229, (2022)
  - Machine Learning with Graphs, XCS224, (2022)
  - Artificial Intelligence: Principals and Techniques, XCS221, (2021)
- DeepLearning.ai courses including Neural Networks and Deep Learning and Sequence Models (2018)