

Alex Bondoux

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Skills

Programming languages: Python, SQL, Bash, Matlab

Notable packages: Numpy, Pandas, Scikit-learn, TensorFlow, NLTK, spaCy, gensim

AWS services: SageMaker Studio, Comprehend, Lex, Transcribe,

EC2, EMR, Athena, Glue ETL Studio, Lambda, S3

AWS certifications: [Data Analytics Specialist](#) & [Machine Learning Specialist](#)



Experience

Vanguard | Philadelphia, PA, USA

Dec 2019 - Present

Machine Learning Engineer, Team Lead in Investment Advice Analytics (5 FTE)

- Designed and built transformed datasets, serving 30+ analysts across several business units. Reduced data overhead from 50% to 15%, cutting average time to insights by a factor of three.
- Collaborated with Data Scientists to deploy and maintain complaint detection models to provide automated classification of survey comments and enable targeted follow up with detractors.
- Took Advice Propensity models from notebooks to production, doubling advice marketing efficiency.
- Modernized infrastructure by migrating 200+ SQL jobs scheduled on Control - M to AWS ECS then AWS Glue ETL, increasing production reliability 10-fold, saving > \$10k/month. Increased internal NPS score by 10%.
- Pioneered open sourcing at Vanguard by writing [sql_translate](#), decreasing average query run time 5-fold.

Insight Data Science | New York City, NY, USA

Sep 2019 - Nov 2019

Data Engineering Fellow

[Lazy Prices](#): a low frequency trading strategy based on NLP of 10-Q/10-K filings.

- Parsed the 10-Q/10-K from the past 25 years and analyzed textual changes over time with Apache Spark ML Lib.
- Benchmarked portfolios driven by the significance of changes in reports against market indexes.
- Built a Flask web app, hosted on EC2 and powered by PostgreSQL as the user interface.

Lord Corporation | Multiple Locations

Technical Project Leader, Lord France (Lyon and Valence, France)

Feb 2018 - Jan 2019

- Managed a team of three engineers to design a \$200k electro-mechanical test machine, mixing various engineering domains. Surpassed initial expectations and exported copies to multiple engineering centers.
- Released two Matlab GUI to automate end of line part acceptance testing for test engineers.

Matlab Engineer, Lord USA (Erie, PA - Raleigh, NC)

Sep 2015 - Jan 2018

- Ported 10+ legacy design spreadsheets over to Matlab.
- Designed & delivered a Matlab GUI for the Rotary Wing department modelling stress in composite bearings.
- Modelled a novel magnetic brake in Matlab. Led 3 FTE on the project, patented the solution (PCT/US18/50864).

Open Source Contributions

[sql_translate](#): HiveQL to Presto SQL translator & validator.

[fmcw](#): Python package for real-time data processing and display of a custom made 6 GHz FMCW radar. Fault tolerant communication with FPGA on USB bus. Open hardware & software.

Education

Master of Science in Aerospace Engineering | Pennsylvania State University

2015

Master of Science in General Engineering | Ecole Centrale de Lyon

2013