

Aaron Glover

MANAGER, MACHINE LEARNING ENGINEER

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A highly skilled Machine Learning Engineer and Manager with over a decade of experience in developing predictive models and data-driven solutions. Proven track record in leading teams, optimizing production processes, and driving significant cost savings. Expertise in Python, ML frameworks, and cloud platforms.

Skills

Languages & Packages	Python, SQL, pandas, numpy, scikit-learn, keras, pytorch, matplotlib, streamlit, shap, mlflow
Platforms	Docker, Kubernetes, Airflow, AWS, GCP, git, Azure Pipelines, GitHub Actions
Areas of Expertise	DevOps, Code Optimization, Code Productionization, Python Packaging, Modeling
Soft Skills	Leadership, Project Management, Strategic Planning, Problem Solving, Communication

Experience

Enterprise Products

Houston, TX

DATA SCIENCE MANAGER - COMMERCIAL

Feb 2022 - Current

- Focused on developing predictive models to assist with commodity trading and decision making. Since inception, over 50 models have been productionized across NGLs, Crude, Natural Gas, spreads, and cross commodities. Assets under management are in the multi-millions.
- As the technical lead, I have lead the team to build a number of production grade systems and frameworks to assist modeling efforts, including a feature selection process, a 'no-code' model deployment system, and a model evaluation framework.

LEAD DATA SCIENTIST

May 2019 - Feb 2022

- Tasked with developing predictive models to assist with commodity trading. The inception of the project started with a team of two and has now grown to eight.
- Developed a recurrent neural net (RNN) for predicting heat exchanger failures. Model was the first deployed solution at Enterprise, implemented in the first 8 weeks of hire.
- Built a Monte Carlo simulation that optimized spare parts inventory, savings in the multi-millions.

Sanchez Energy

Houston, TX

MACHINE LEARNING ENGINEER

Apr 2017 - May 2019

- Developed a model fitting solution for determining a well's spontaneous (SP) log curve using peak detection methods and Kalman filters. The end result was used for identifying potential oil field plays to target.
- Developed a Markov Chain Monte Carlo (MCMC) solution for simulating a well's decline curve and ultimate recovery. This augmented Engineering's decision making on how much a well will produce over its lifetime.
- Optimized an in house developed geophysics simulator in Python which decreased runtime by 6x and lines of code were reduced 10x.
- Contributed to the development of a multi model prediction framework for predicting well production. The solution was a significant improvement on the industry standard decline curve fitting.
- Implemented a real time alert for detecting tubing leaks which resulted in a cost savings in the six figures. An industry standard deterministic model was required by Engineering, the model was optimized by sampling the search space with a Tree-structured Parzen Estimator.

Occidental Petroleum

Houston, TX

DATA ANALYTICS / BI ENGINEER

Jan 2012 - Mar 2017

- Developed a Monte Carlo simulation to determine the optimal number of workover rigs for a given field. Implemented in fields across Texas and California with a savings in the high six figures.
- Developed over 350 SSRS reports and Spotfire dashboards over the course of two years.
- Designed and developed multiple SSAS cubes for operational and well servicing data, query times were reduced 1,000x.
- Maintained and enhanced the main Operational Data Store (ODS) used company wide for production reporting.
- Automated the delivery of partner reports utilizing SSRS and SQL which resulted in an 80% reduction in man hours.

Education

Texas A&M | M.S. in Analytics

Houston, TX

MAJOR GPA: 3.8

May 2017

- Thesis: Predicting the likelihood of ESP well failures utilizing survival analysis and gradient boosting.





University of North Texas | B.S. in Information Systems

Denton, TX

MAJOR GPA: 4.0

Dec 2011

Projects

-  encant - A user-friendly python version management. tool for developers. (2023)
-  appias - A library that integrates a the standard steps for exploring datasets and building machine learning models efficiently. (2019)
-  Taleb but AI - Developed a GPT-2 model trained on Nassim Taleb's quotes to generate insightful and contextually relevant tweets. (2019)
-  Awair - A Python library for accessing and downloading data from Awair air quality monitors. (2020)