

# Michael Duncan

*Machine Learning Engineer*

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## Experience

***Machine Learning Engineer*** Sept 2020 - Present

DispatchHealth | Denver, CO

- Developed a new XGBoost regression model to predict how long a provider will be on scene, reduced the RMSE by 20%, and created a new API with FastAPI
- Built 15+ ELT data pipelines using Apache Airflow, dbt, and Prefect leveraging AWS services like Redshift, ECS, S3, Glue, and others
- Used ElasticSearch and Kibana to analyze logging data and Looker to communicate model performance
- Created dbt models with SQL and jinja to transform 10+ data sources into efficient Redshift tables used by Looker, Data Analytics and Data Science

***Associate Data Science Instructor & Data Science Resident*** March 2020 - Sept 2020

Galvanize Inc. | Denver, CO

- Performed lectures and helped students in the Data Science Immersive (DSI) with Python, SQL, Docker, Bash, and other data science technologies

***Data Scientist*** November 2019 - March 2020

El Cap | Denver, CO

- Performed a customer segmentation analysis for climbing gym customers in the Denver area
- Developed a cannibalization model in order to predict the effects of opening new gym locations
- Model predicted member cannibalization with 75% accuracy
- Used geospatial analysis to featurize customer behavior

## Skills

***Programming:***

Python, SQL, Bash, VCS (git), Pandas, Numpy, Jupyter Notebooks, Python packaging, Vim

***Data Science:***

Matplotlib, Scikit-learn, XGBoost, Data Wrangling, Statistical Modeling, Ensemble Models, Clustering Methods, Looker

***Data Engineering:***

Apache Airflow, Prefect, dbt, AWS, GCP, Linux, Docker, PostgreSQL, MongoDB, Terraform, Spark, FastAPI, Flask, Kibana, ElasticSearch, Web Scraping

## Education

***Data Science Immersive (Bootcamp)*** 2019 - 2020

Galvanize Inc. | Denver, CO

- 13-week immersive with 700+ hours of coding, weekly Case Studies, and 3 capstone projects. Python-based curriculum focused on machine learning and best practices in statistical analysis.

***B.S. Mechanical Engineering*** 2011 - 2015

Lafayette College | Easton, PA

- NCAA Division 1 Football Player