

Maxwell Patterson

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LinkedIn: <https://www.linkedin.com/in/maxwell-patterson/> | Portfolio: <https://mmpatterson.github.io/>

SUMMARY

Data Science and Data Visualization professional with a background in consulting. Earned a certificate in Data Science from Northwestern University and have 7+ years of professional experience in data analysis. Educational background includes a B.S. in mathematics and physics from Dickinson College. Experienced in Python, SQL, R, JavaScript, and Tableau to create full-stack data solutions. Currently attending the University of Texas- Austin in pursuit of an M.S. in Data Science.

TECHNICAL SKILLS

- **Programming:** Python3 (Pytorch, PySpark, MLflow, NumPy, Pandas, Requests, Flask, Scikit-Learn, Matplotlib), SQL (Databricks SQL, PostgreSQL, Microsoft SQL Server), LookML, noSQL (mongoDB), JavaScript (Plotly, D3, Leaflet), R (ggplot, tidyverse)
- **Machine Learning:** Deep Learning Networks, Random Forests, Principal Component Analysis, K-Nearest Neighbors, K-Means, Logistic Regression, Linear Regression, Boosting Algorithms
- **Tools:** Databricks, Alteryx, Tableau, Looker, APIs (SwaggerUI), Jupyter Notebooks, HTML5, CSS3, Microsoft Office, Microsoft Visio, Microsoft Visual Studio, Git, SQL Server Management Studio, AWS (S3, RDS)

PROFESSIONAL EXPERIENCE

SUFFOLK CONSTRUCTION

Roxbury, MA

Senior Data Analyst

March 2022 – Present

- Created a productionized machine learning model in Databricks using MLflow that identifies construction projects likely to have a safety incident. The fiscal quarter after its initial implementation was the best quarter for safety in company history
- Analyzed historical project details to evaluate the company's ability to estimate staffing requirements on construction projects
- Built an application using Python and Tableau that shows the People & Culture team the closest employees to potential future job sites in order to assist in staffing teams
- Reviewed company's 3rd party brand survey scores to alert Chief Marketing Officer how company compares to its key competitors
- Used Alteryx to manage the data pipelines for key monthly reporting metrics that are evaluated by the Executive Committee

ZIPCAR

Boston, MA

Data Analyst

September 2021 – March 2022

- Identified approximately \$70 of missing revenue per user in a dbt model that aims to estimate the average user's EBITDA over their first 90 days of membership
- Queried search data to find members in key markets that stopped searching for reservations on Zipcar's app after being active users of the service previously
- Built a Looker dashboard that allowed the billing team to measure success and billing accuracy via relevant KPIs

NIELSEN IQ

Chicago, IL

Analytical Framework Consultant

August 2019 – September 2021

- Led project that used Python and SQL to develop a reporting tool hosted at an API endpoint. Using product information from both database and API data sources, this reporting tool had built-in data validation functionality based on defined use cases, and it reduced manual analysis time by 95%
- Researched NielsenIQ product data to create database prototypes based on the needs of retailers and manufacturers in the CPG industry. Met with client SMEs to confirm databases meet contractual requirements
- Member of an efficiency team within the organization that aimed to identify manual processes that could be replaced with Python scripts to reduce the length of product delivery timelines

TRILOGY EDUCATION SERVICES

Teaching Assistant, Data Visualization Program

Chicago, IL

April 2020 – August 2020

- Assisted students in a 24-week boot camp that teaches them Python, SQL, noSQL, JavaScript, Tableau, and machine learning concepts
- Reviewed and graded code submitted by students. Provided feedback in a timely manner

REVENUE SOLUTIONS, INC.

IT Consultant

Chicago, IL

December 2017 – August 2019

Associate IT Consultant

September 2016 – December 2017

- Received company award for excellence in communication with the client
- Used SQL Server to provide Production support for web applications that improve tax processing efficiency for three separate state, city, and county government agencies
- Frequently led meetings with client teams to discuss progress on product enhancements
- Designed software requirement specifications (SRS) for multiple custom interfaces involving ETL, providing access to more external data for clients

EDUCATION

UNIVERSITY OF TEXAS- AUSTIN

Master of Science, Data Science (Expected Spring 2024)

January 2021 – Present

- Relevant Coursework: Machine Learning, Probability & Statistics, Data Structures & Algorithms, Causal Inference, Regressions, Natural Language Processing, Deep Learning, Data Visualization, Reinforcement Learning

NORTHWESTERN UNIVERSITY

Certificate, Data Science Boot Camp

August 2019 - February 2020

DICKINSON COLLEGE

Bachelor of Science, Mathematics and Physics

August 2012 - May 2016

PROJECTS

WORLDWIDE EARTHQUAKE TRACKER

Github Link: <https://github.com/mmpatterson/leaflet-earthquake-tracker>

Link to Deployed Project: <https://mmpatterson.github.io/leaflet-earthquake-tracker/earthquake-tracker/>

- A site that displays information for earthquakes that have occurred within the last 7 days
- Using public data, plotted the location of each earthquake on a Leaflet map and scaled its size based on the severity of the event
- The map was created using Leaflet.js, and the API providing the data was made available by the United States Geological Survey

CHICAGO BUILDING ENERGY EFFICIENCY

Github Link: <https://github.com/mmpatterson/chicago-buildings>

Link to Deployed Project: <https://mmpatterson.github.io/chicago-buildings/index.html>

- A site that analyzes the energy efficiency of large buildings in Chicago, IL based on the age, location, and size of the buildings
- Using public data, I made two map visualizations: one plots buildings by age and the other plots buildings by energy efficiency
- The maps were created using Leaflet.js, and the API supplying the data was provided by the City of Chicago