

## WIL2 Tech Portfolio Overview – Monsurat Adejumo

**Name:** Monsurat Adejumo

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**GitHub Portfolio:** <https://github.com/Monsurat118/data-science-portfolio>

## About Me

I am a Machine Learning and Data Science practitioner skilled in Python, data cleaning, visualization, and model development. I enjoy transforming raw datasets into clear insights and building models that solve real-world problems. My portfolio highlights the projects I completed during my Machine Learning diploma at NorQuest College, demonstrating hands-on experience with ML workflows, data preprocessing, prediction modeling, and exploratory analysis.

## Portfolio Summary

This portfolio contains **four applied data science and machine learning projects**, each showcasing different technical skills and problem-solving methods.

### Project 1: Go Auto Used Car Price Prediction

**Objective:**

Predict the sale price of used cars based on features such as mileage, year, make, and model.

**Key Skills:**

Regression modeling, data cleaning, feature engineering, EDA, sklearn.

**Highlights:**

- Performed exploratory analysis to understand pricing patterns
- Built and evaluated multiple ML models
- Optimized features to improve prediction accuracy

### Project 2: NPRI Environmental Release Prediction Model

**Objective:**

Predict pollutant release quantities using the Canadian National Pollutant Release Inventory (NPRI) dataset.

**Key Skills:**

EDA, regression modeling, feature selection, data transformation, and interpretation.

**Highlights:**

- Cleaned and restructured environmental data
- Built a prediction model to estimate pollutant releases
- Identified major contributors and trends

**Project 3: NSW Migration Analysis (Northern Saw-whet Owl)****Objective:**

Analyze migration patterns using telemetry data from Motus tracking stations.

**Key Skills:**

Time-series analysis, geospatial visualization, clustering, ML analysis.

**Highlights:**

- Identified active migration periods
- Visualized detection patterns across regions
- Applied clustering to explore movement behavior

**Project 4: LEGO Image Analysis (Computer Vision)****Objective:**

Use image processing techniques to segment and analyze individual LEGO pieces from an image.

**Key Skills:**

OpenCV, thresholding, segmentation, preprocessing, and visualization.

**Highlights:**

- Worked with raw image data
- Applied threshold methods to isolate shapes
- Demonstrated understanding of basic computer vision workflows

**Technical Skills Summary****Programming & Tools:**

Python, Pandas, NumPy, Scikit-Learn, Matplotlib, Seaborn, OpenCV, Git, GitHub

**Core Competencies:**

Data Cleaning, Feature Engineering, Regression Modeling, Classification, Visualization, EDA, Time-Series Analysis, Clustering, Image Processing