Alice Shirley

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Looking to utilize my programming skills and knowledge of data modeling & analysis tools to effectively translate findings of datasets in meaningful ways. High interest in the intersection of Science and Data Analysis

WORK EXPERIENCE

Computational Math Science & Engineering Department at MSU **August 2024-Present**
CMSE 201 Undergraduate Learning Assistant *East Lansing, MI*
Assist students by holding office hours, grading assignments, and fostering a collaborative learning environment through peer engagement and problem-solving support

Webasto Roof Systems, Inc **May 2024-August 2024**
Americas' Purchasing & Supply Quality Intern *Auburn Hills, MI*
Analyzed supplier data (Parts Per Million, Q2s, Cost Recovery) for all plants in the Americas' regions via SAP, Python, and PowerBI

- **Supplier Analysis Framework:** Created a Python script to extract and clean historical SAP data, generating multiple visualizations on supplier health. The script featured a regression model function that predicts high-risk suppliers by forecasting Complaint Quantities over a specified date range and subset of data to identify 'danger suppliers'
- **Automated Updating Financial Planning SharePoint:** Constructed a flow through Power Automate that pulled specific data from submitted BES form excel attachment into a periodically updating SharePoint list upon submission and approval from VPs through an excel typescript

MSU Formula SAE Team **June 2023-December 2024**
Ergonomics Lead *East Lansing, MI*
Responsible for designing, validating, and manufacturing the pedal systems and seat as the team transitioned to an EV vehicle from ICE for competition

- **Design Testing:** Post-design, ensured a part's validity through force testing simulation on ANSYS finite element analysis

KEY PROJECT

Fraud Detection Machine Learning Project *https://github.com/shirle21/Fraud-Detection*

Built an optimized supervised learning model for a binary classification of fraudulent and non-fraudulent credit card transactions, primarily evaluating accuracy with the AUPRC

- **Models Tested**: Dummy classifier, Support Vector Models and Stochastic Gradient Descent Models
- **Best Model:** SVM with an RBF kernel (without SMOTE) achieves the highest AUROC (0.9809) and F1 score (0.7611)
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EDUCATION

Michigan State University
B.S Data Science, B.S. Statistics *August 2022-**May 2026***

SKILLS

Python *(Intermediate) Proficient in data analysis & machine learning including but not limited to:*

- TensorFlow, Ridge/Lasso Regression, SVM/SVC, K-fold Cross Validation, Polynomial & Spline Regression

R *(Intermediate) Proficient in applications including but not limited to:*

- Sampling, Method of Moments estimators, Linear Combinations, PCA, Hypothesis Testing

Other Software: *Power Automate, Power BI, Excel SAP ERP, Siemens NX AutoCAD, Ansys Finite Element Analysis*