Mike Feldman

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EXPERIENCE

The MITRE Corporation, McLean, VA   **July 2021 to Present**
Lead Data Scientist   *April 2023 to Present*
Senior Data Scientist   *April 2022 to April 2023*
Intermediate Data Scientist   *July 2021 to April 2022*

Project Lead - Noncompliance Detection Model for Internal Revenue Service (IRS)
- Led a team of five data scientists to develop and deliver a deep learning prototype detecting tax noncompliance in taxpayer networks.
- Designed the team's model development approach, covering problem framing, feature engineering, model architecture selection, and performance evaluation.
- Demonstrated prototype effectiveness by exceeding baseline model performance on key evaluation metrics, supporting its transition to government partners for further development.
- Accelerated experimentation by building a robust Python pipeline (PyTorch, MLflow) for rapid model training, testing, and iteration.
- Developed modular, maintainable data pipelines (pandas, networkx, scikit-learn) to automate processing of complex graph-based network data, supporting scalable model development.
- Improved model transparency and explainability by leading the development and piloting of model and data cards.

Task Lead - Fraud Referral Pipeline Automation for IRS
- Automated a high-impact fraud detection workflow by building a flexible Python pipeline to extract and transform data from diverse sources and generate fraud referral reports. Processing time reduced from days to hours.
- Developed and deployed a SharePoint-based case tracking system and Power BI dashboard to replace a manual, error-prone Excel process, streamlining fraud referral reporting.

Individual Contributor, Taxpayer Filing Survey Analysis for IRS
- Delivered actionable insights to IRS stakeholders by analyzing taxpayer survey data in R, addressing key questions on filing behavior, and producing a detailed research report.

University of Chicago Crime and Education Labs, Chicago, IL   **November 2020 to June 2021**
Data Research Assistant
- Developed and tested Python tools for technical staff, including a demographic data aggregator and new features for a geocoding tool to convert addresses to geographic coordinates.

American Civil Liberties Union, New York, NY   **June 2020 to August 2020**
Data Science Intern
- Built Looker dashboard with SQL data pipeline to track email campaign performance and support donor engagement.

Two Sigma Investments, New York, NY   **January 2013 - July 2019**
Compensation Analyst   *August 2015 - July 2019*
- Ensured reliability of the firm's bonus budget funding model by refining, validating, and troubleshooting the model throughout the year.
- Delivered workforce insights to HR and senior leadership by building and maintaining dashboards for attrition, recruiting, headcount, and survey analytics using Tableau and Excel.

Employee Relations Analyst   *January 2013 - July 2015*

PROJECTS

DC 311 ETA ([Live App](#) | [GitHub](#)): Built and deployed an interactive web application that uses machine learning to predict resolution times for Washington DC 311 service requests. Developed data pipelines, trained classification and regression models (Elastic Net, logistic regression, XGBoost) with scikit-learn, Optuna, and MLflow, and deployed with Streamlit.

EDUCATION

University of Chicago - MS, Computational Analysis and Public Policy, 2021
University of Pennsylvania - BA, Political Science, 2012

TECHNICAL SKILLS

Python (pandas, scikit-learn, PyTorch, MLflow, Optuna, networkx), SQL, R, BI tools (Power BI, Tableau, Looker), Streamlit