ADAM PRPICK

APEGA EIT

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Portfolio: AdamPrpick.com

PROFESSIONAL SUMMARY

Engineer with hands-on experience building and deploying production machine learning applications using Python, Azure ML, and neural networks. Demonstrated ability to develop end-to-end AI solutions from model training to web deployment, with a focus on model interpretability and real-world business impact. Strong foundation in data science, cloud computing, and full-stack development.

TECHNICAL SKILLS

- **Languages & Frameworks:** Python (Pandas, NumPy, Scikit-learn, XGBoost, TensorFlow/Keras, SHAP, Joblib, Flask), SQL, HTML, CSS, JavaScript, Lua, VBA
- **Machine Learning & AI:** Model training, regression & tree-based models, interpretability (SHAP), neural networks, feature engineering, deployment pipelines
- **Web Development:** Flask web applications, Heroku deployment, interactive frontends
- **Cloud & DevOps:** Azure ML SDK, Docker, Azure Container Apps
- **Data Analytics & BI:** PostgreSQL, pgAdmin, Power BI (Desktop & Service, DAX, interactive dashboards), end-to-end data pipelines (database design → ETL → visualization)
- **Visualization & Analysis:** Matplotlib, Seaborn, interactive dashboard design

PROJECTS & EXPERIENCE (AdamPrpick.com to test apps)

Chicago Crime Prediction & Power BI Dashboard: Machine learning system predicting crime severity across 77 Chicago community areas using XGBoost (R^2 = 23.3%). Engineered end-to-end pipeline processing 490K+ crime records (2023-2025) and generated 2.25M predictions for 2026. Built interactive Power BI dashboard with temporal slicers, risk categorization, and geographic heatmaps for police resource allocation. Used SHAP analysis to quantify feature contributions (Community Area: 64.3%, Time Block: 13.5%). Tools: Python (XGBoost, Pandas, SHAP), Power BI, DAX. | 2026

Insurance Cost Prediction App: A Flask-based web application that predicts U.S. health insurance costs using a linear regression model trained with Azure Machine Learning (R^2 = 0.95). Built with data from Kaggle and deployed on Heroku. Demonstrates end-to-end ML application development from model training to production deployment.

Loan Approval App: A Flask-based application that predicts SBA loan outcomes based on user-provided business details. Trained using Azure Machine Learning with a neural network model using a Kaggle dataset. Features interactive frontend and production-ready deployment.

EDUCATION

B.Sc. Petroleum Systems Engineering

University of Regina | 2023

PROFESSIONAL DEVELOPMENT

- **Machine Learning Specialization** - DeepLearning.AI (Andrew Ng) | Coursera | 2025
- **Google Machine Learning Crash Course** - Google Developers | 2025