Self-Assessment

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Access Number: B35093
Course: DSC8201 - Data Science Lifecycle
Date: December 2025
Throughout this project, I implemented a complete data science lifecycle for credit scoring, demonstrating CRISP-DM methodology, privacy compliance, and MLOps deployment. I created a 40,000-record dataset, performed comprehensive EDA, and engineered 35+ domain-specific features.

The main challenge was balancing accuracy with fairness. I achieved this through careful feature selection, SMOTE resampling, and comprehensive fairness testing (Disparate Impact Ratio: 0.87-0.99).

I trained four models, with XGBoost achieving 82.34% accuracy and 0.8567 ROC-AUC. SHAP analysis provided transparent explanations critical for regulatory compliance.

Successfully deployed a FastAPI application with Docker and MLflow tracking. Key learnings: (1) feature engineering drives performance more than algorithm choice, (2) fairness must be embedded from design, (3) explainability enables compliance and trust, (4) privacy requires proactive governance. This project bridged theoretical ML with practical production deployment for responsible financial AI.

Word Count: 150 words