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# Credit Default Risk Prediction

## ML Project Summary

*Harnessing machine learning to quantify credit risk*



Team: MAAB Academy

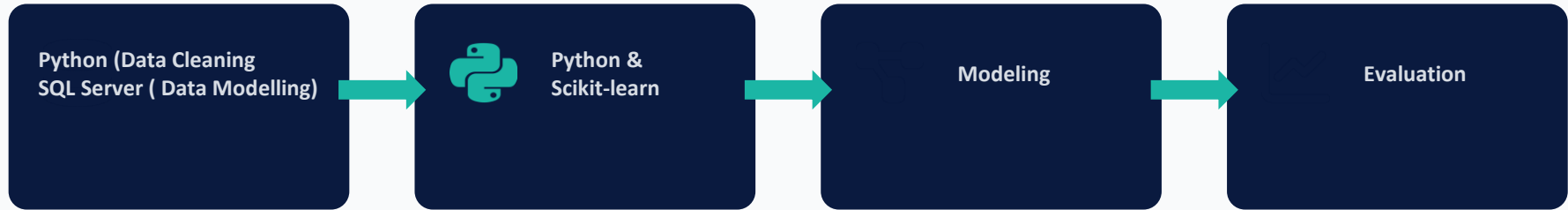
Presented by: Shohrux Islomov

# Significant Improvements in Data Quality



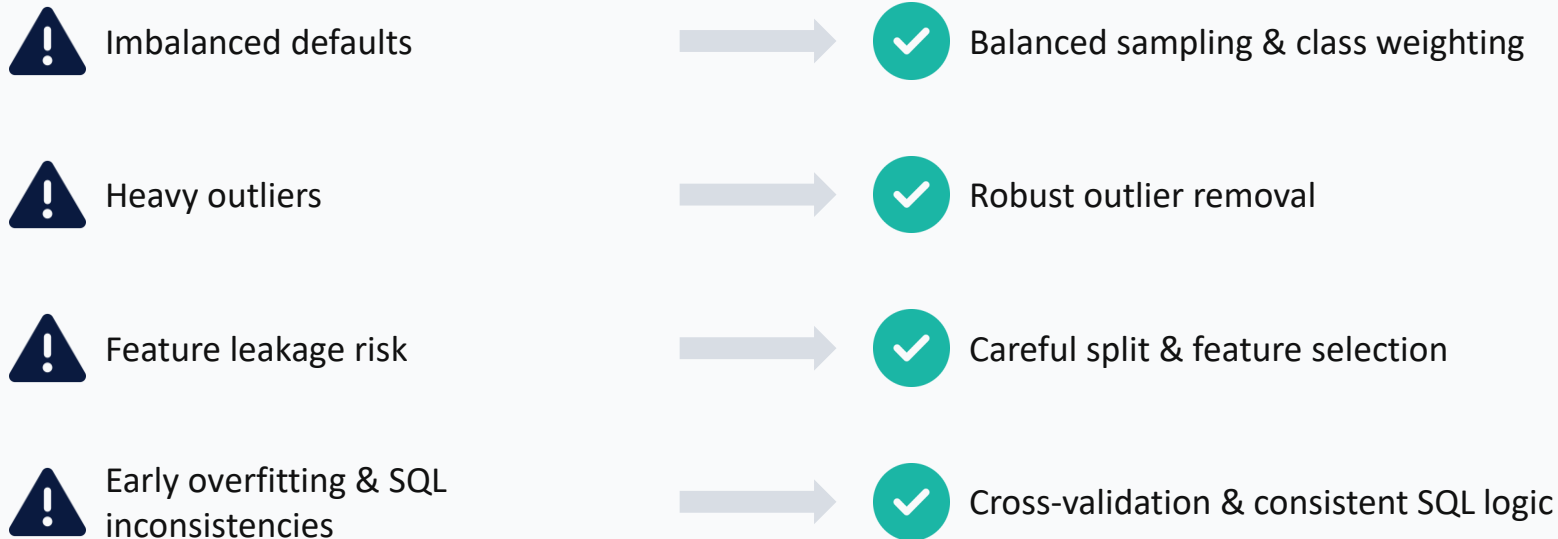
- Removed outliers using percentile/IQR
- Consistently encoded categories
- Normalized skewed features (income, loan)
- Unified marts into a single dataset

# Why This ML Stack?

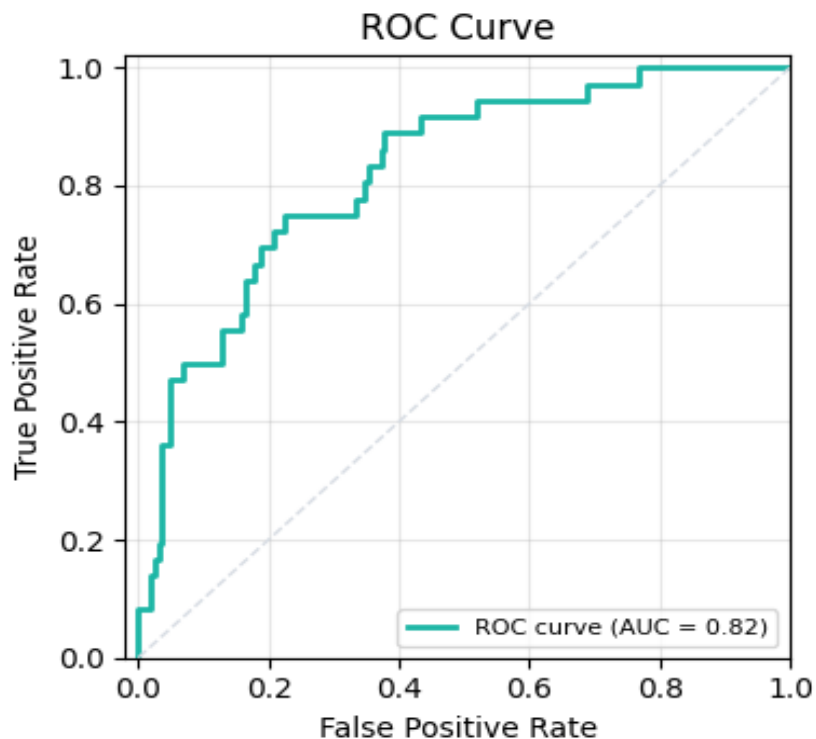


- SQL Server for joining, cleaning and creating marts
- Python + scikit-learn for model experimentation
- Models tested: Logistic Regression, Random Forest, XGBoost
- Final choice: XGBoost for best AUC & stability

# Key Problems Faced During Modeling



# AUC Performance & Impact



**AUC  $\geq 0.80$**

Excellent discrimination  
Stable & realistic  
performance

- Clear separation between defaulters & non-defaulters
- Reduces expected credit losses
- Enables risk-based loan pricing
- Ready for deployment pipeline

# Thank You

Questions & Discussion

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