

# DUNCAN MUNSLOW

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## PROFESSIONAL EXPERIENCE

### FirstBank of Colorado

*Data Analyst*

**July 2019 – Present**

#### *Data Analytics*

- Generated ~65,000 internal leads for marketing opportunities of Firstbank mortgage and credit card services. Applied text mining techniques to vendor bill-pay data to identify customers paying non-FirstBank credit cards and mortgages via bill-pay service
- Analyzed historical credit card defaults and designed features, trained and deployed an XGBoost/Logistic regression ensemble model to predict probability of default. Achieved rate of detection of 3% compared to historical default rate of 0.1%
- Increased transaction limits for ~35,000 mobile deposit and P2P customers. Developed criteria for automatically increasing limits for new mobile deposit and P2P customers
- Developed R Shiny app to reduce call times when enhanced customer verification is required. App interfaced with oracle databases to dynamically present verification questions based on available customer attributes and transactional behavior

*Fraud Data Analyst*

*Associate Fraud Data Analyst*

**July 2018 – July 2019**  
**August 2017 – July 2018**

#### *Fraud*

- Generated \$300k/year in check fraud loss-avoidance with an automated process in R
- Reduced mobile check deposit fraud alert volume by 30%, while retaining 99% of previously reviewed fraud items through statistical analysis of historical data
- Increased identification of disputed fraud transaction in database from 70% to 99%. Applied Levenshtein distance algorithm to merge unstructured text data from disputes with structured transaction data and insert matched transactions into sandbox database
- Designed features and trained logistic regression models for fraud detection in R Implemented models in real-time SQL based fraud rules engine (Proactive Risk Manager)
- Reduced time for point-of-compromise detection for debit cards from minutes to seconds. Developed a custom binary search algorithm in R using C++ enabling process to scale across thousands of compromised cards and millions of rows of transactional data
- Built R Shiny dashboard map to identify points-of-compromise using geo-locational data
- Developed R library for fraud team with helper functions to improve analyst efficiency

## EDUCATION

### Georgia Institute of Technology, Atlanta GA

*Candidate for Online Master of Science in Analytics*

**Expected Graduation Fall 2022**

### Metropolitan State University, Denver, CO

*Bachelor of Arts in Economics | Minor in Statistics*

**May 2017**

## SKILLS

R, T-SQL, PL/SQL, Python, R Shiny, MS Office, regular expressions, Tableau, C++, Java, SAS, JIRA, process automation, data visualization, web scraping