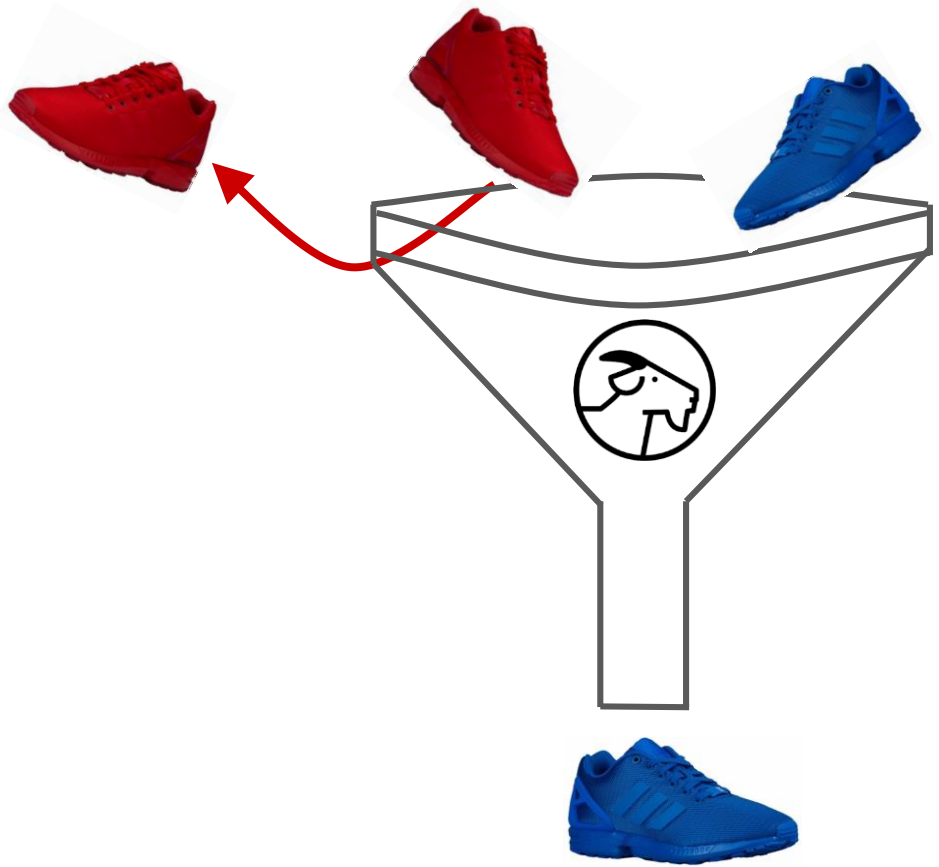
FraudBuster

Saina Lajevardi

- mobile app for sneaker lovers
- it guarantees the purchases



Fraud

stolen identity

fake sneakers

Current Fraud Detector

- the system is not automated
- it requires extensive man hours
- it is also expensive

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inefficient

Deliverable: My Fraud Detector

- an **automated** fraud detection model to verify any order **efficiently** and **accurately**

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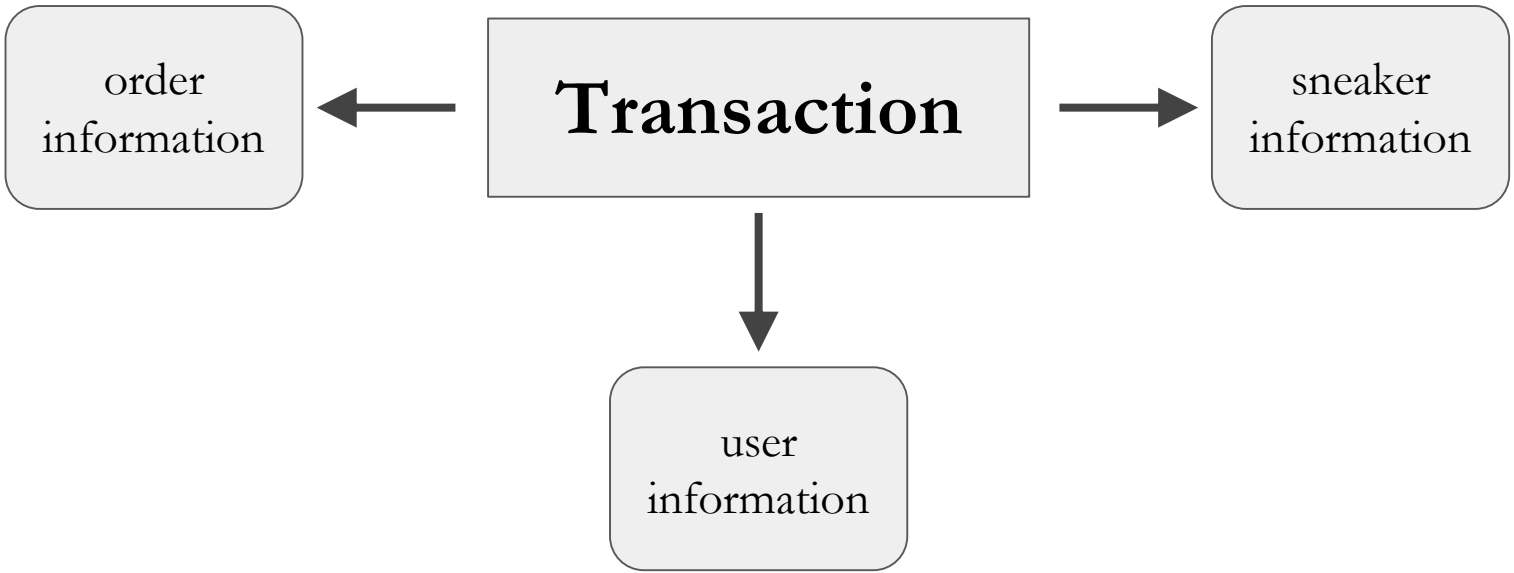
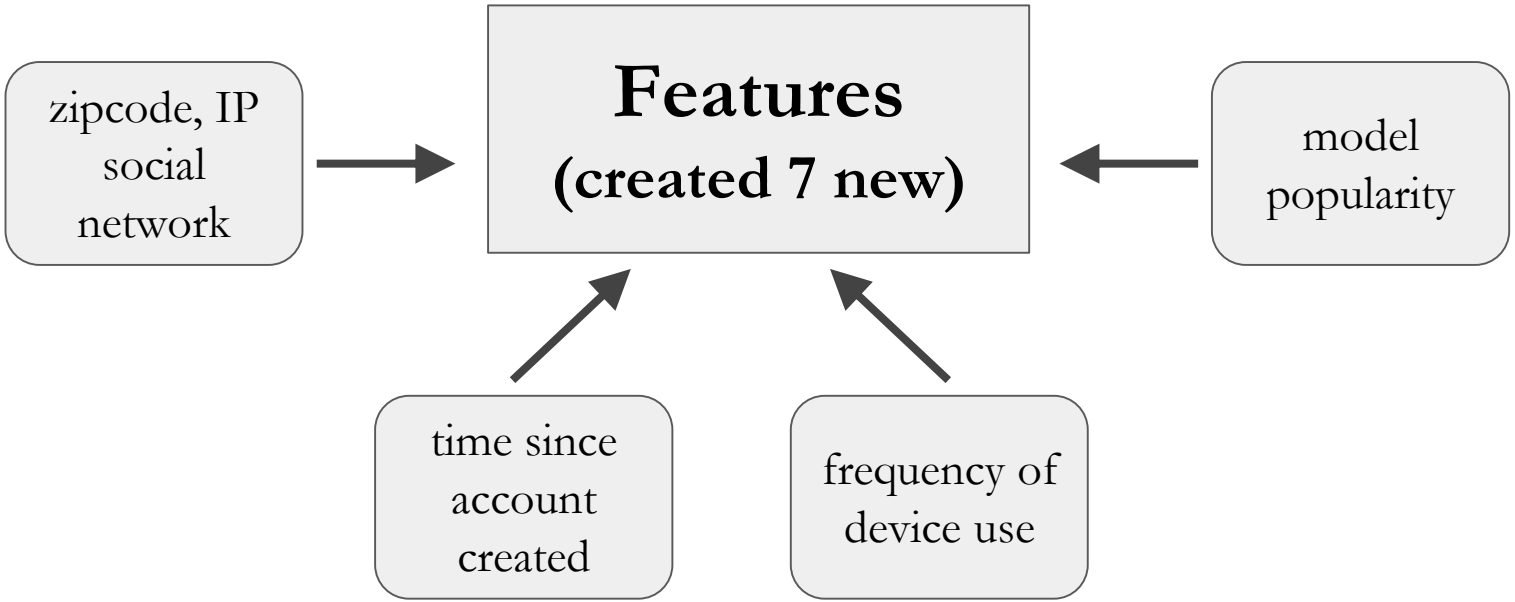
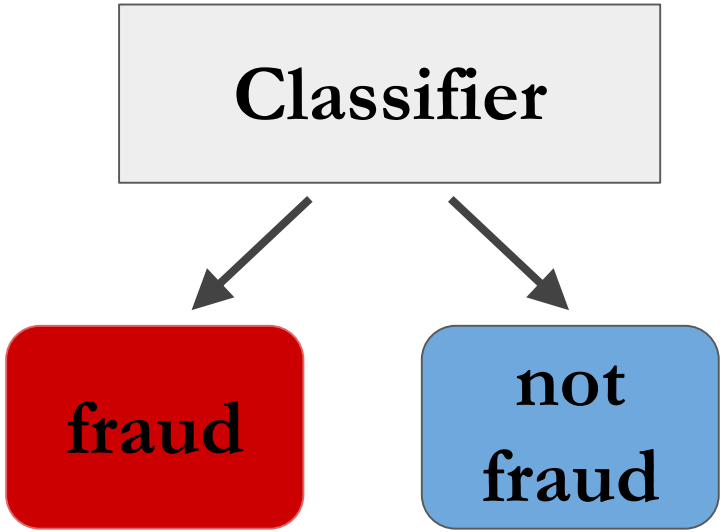
Data Exploration (100K+ records) → Feature Selection & Engineering → Random Forest Classifier



Data Exploration (100K+ records) → **Feature Selection & Engineering** → Random Forest Classifier



Data Exploration (100K+ records) → Feature Selection & Engineering → **Random Forest Classifier**



FraudBuster Performance

recall	0.87
precision	0.84
AUC	0.97

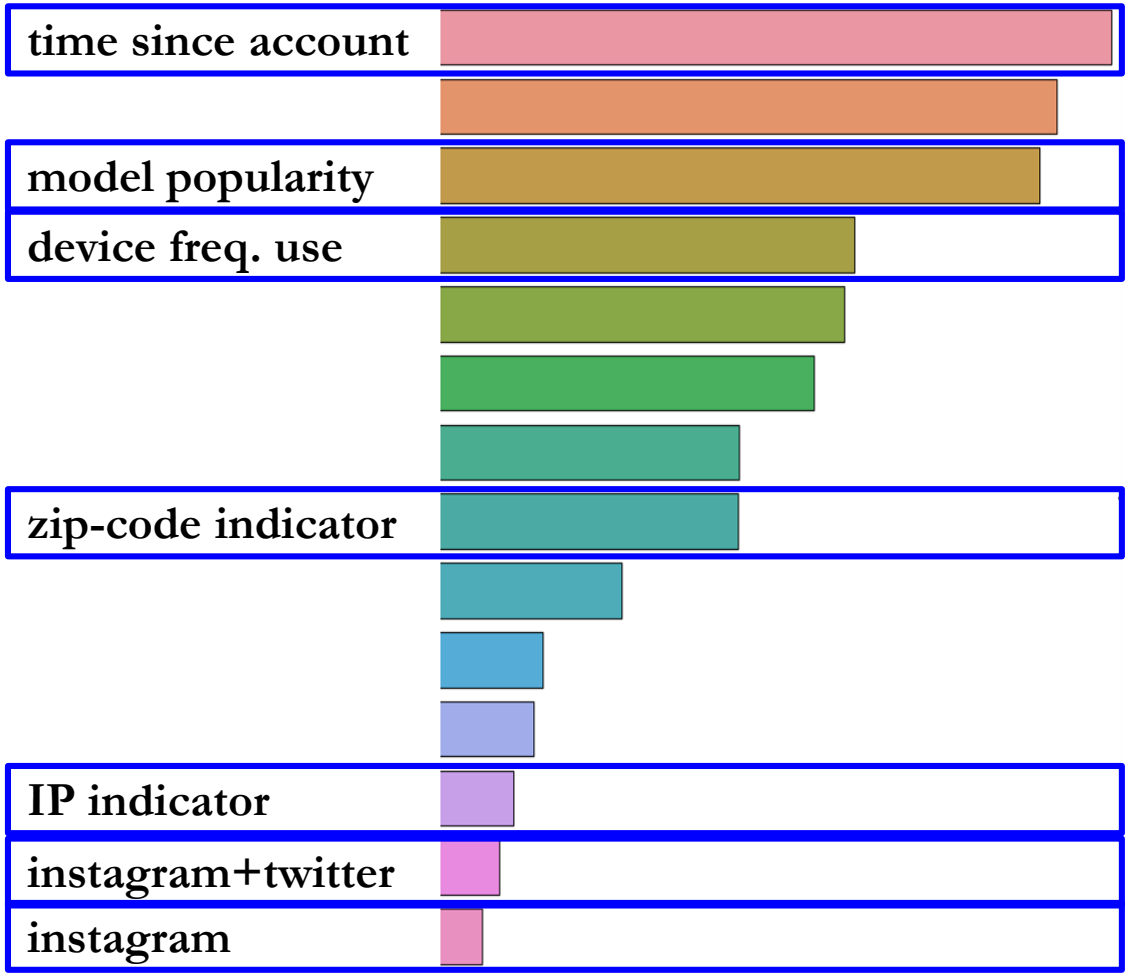
FraudBuster vs Current Model

↑ **Recall:** 52% to 87% (>**1.67x**)

↓ **FPR:** 8.7% to 0.6% (>**14.5x**)

Features

I **created** 7 new features
and **selected** 7 existing ones



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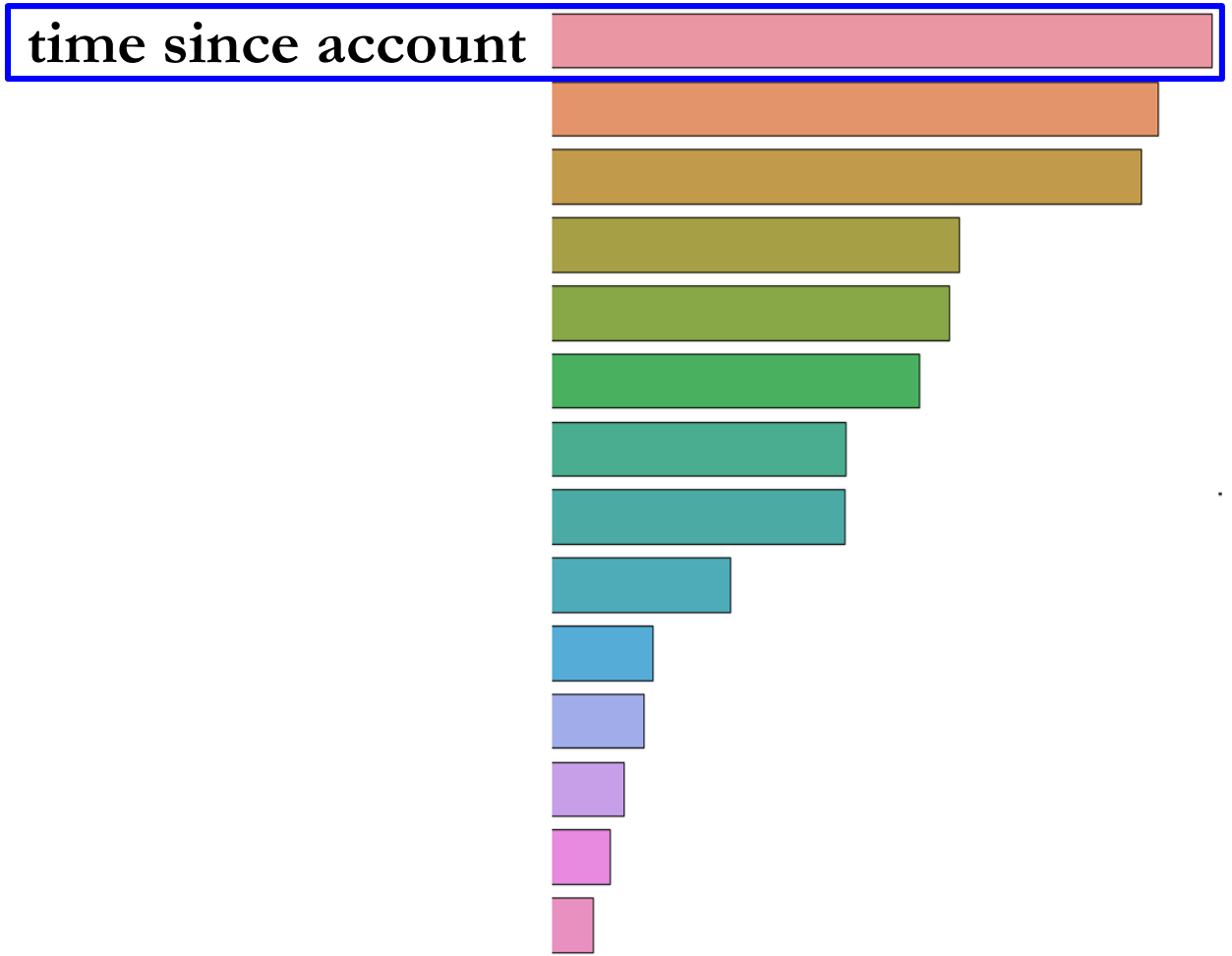
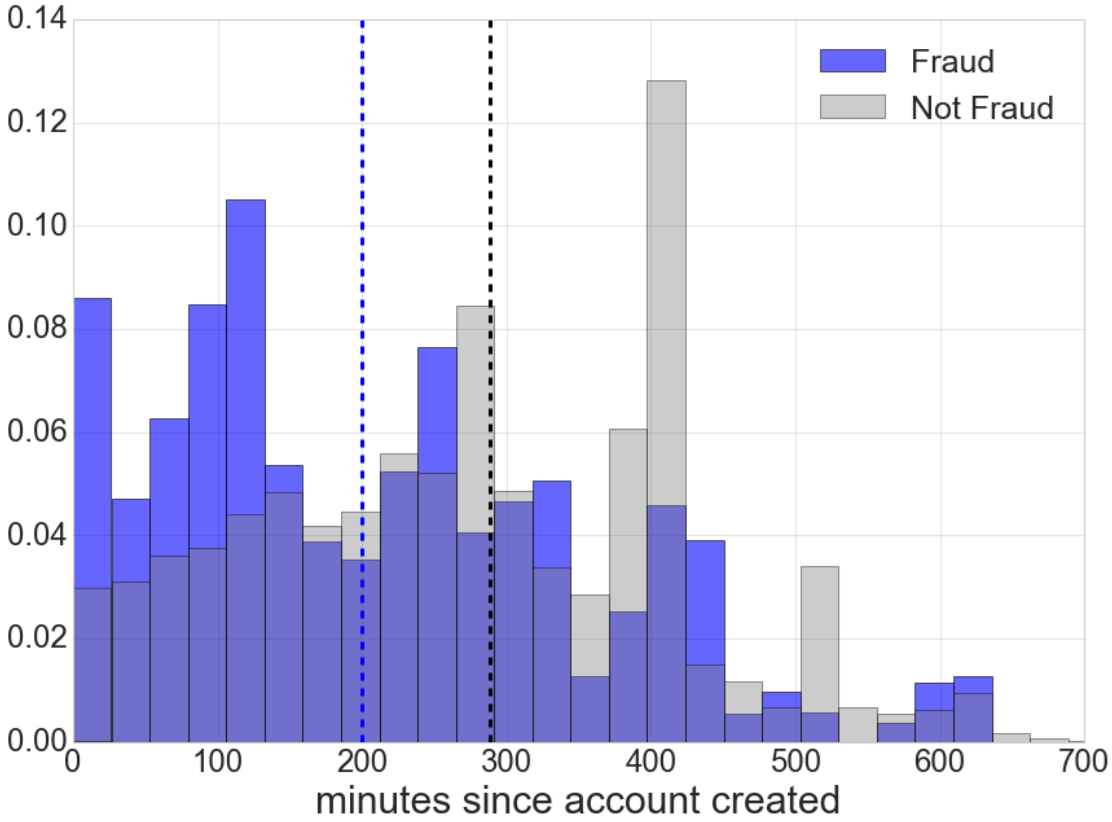


Fraudsters act faster!



FraudBuster saves the mobile-app

> $250K annually

+ expensive man hours

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FraudBuster is **robust** and **adaptable** to integrating new features if needed

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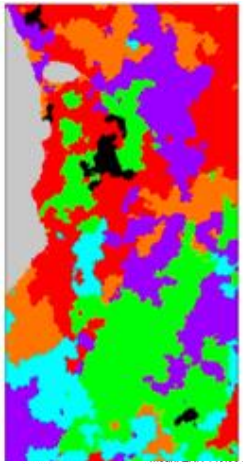
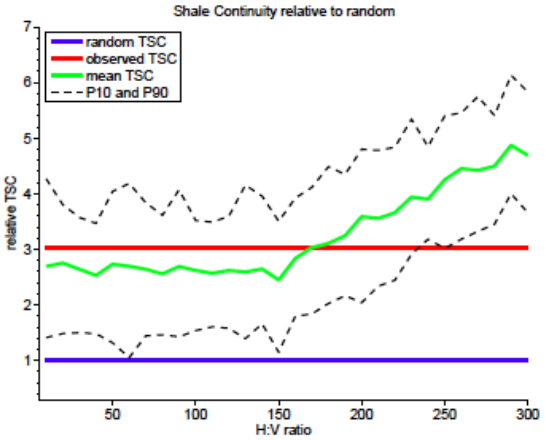
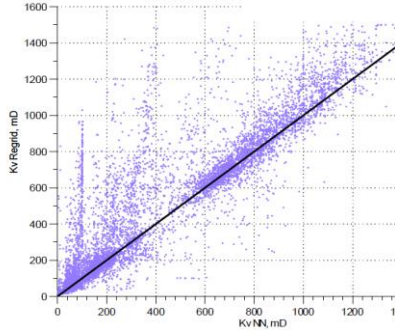
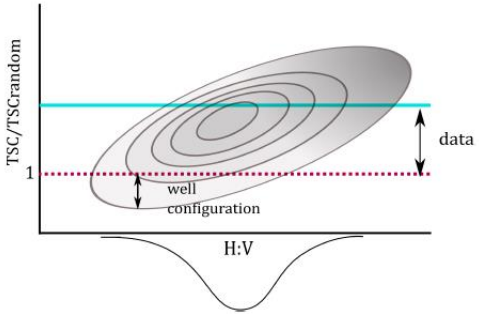
Geostatistics









feature importance
timestamp
own_count
product_id
device
want_count
_selling_count
sign_in_count
zipcode
points
account_det
seller_score
IP
social
instagram

	predicted fraud	predicted non-fraud
actual fraud	867	128
actual non-fraud	167	26160

probability threshold>71%
recall : 87%
precision: 84%

	predicted fraud	predicted non-fraud
actual fraud	867	101
actual non-fraud	417	25910

probability threshold>80%
recall : 90%
precision: 68%