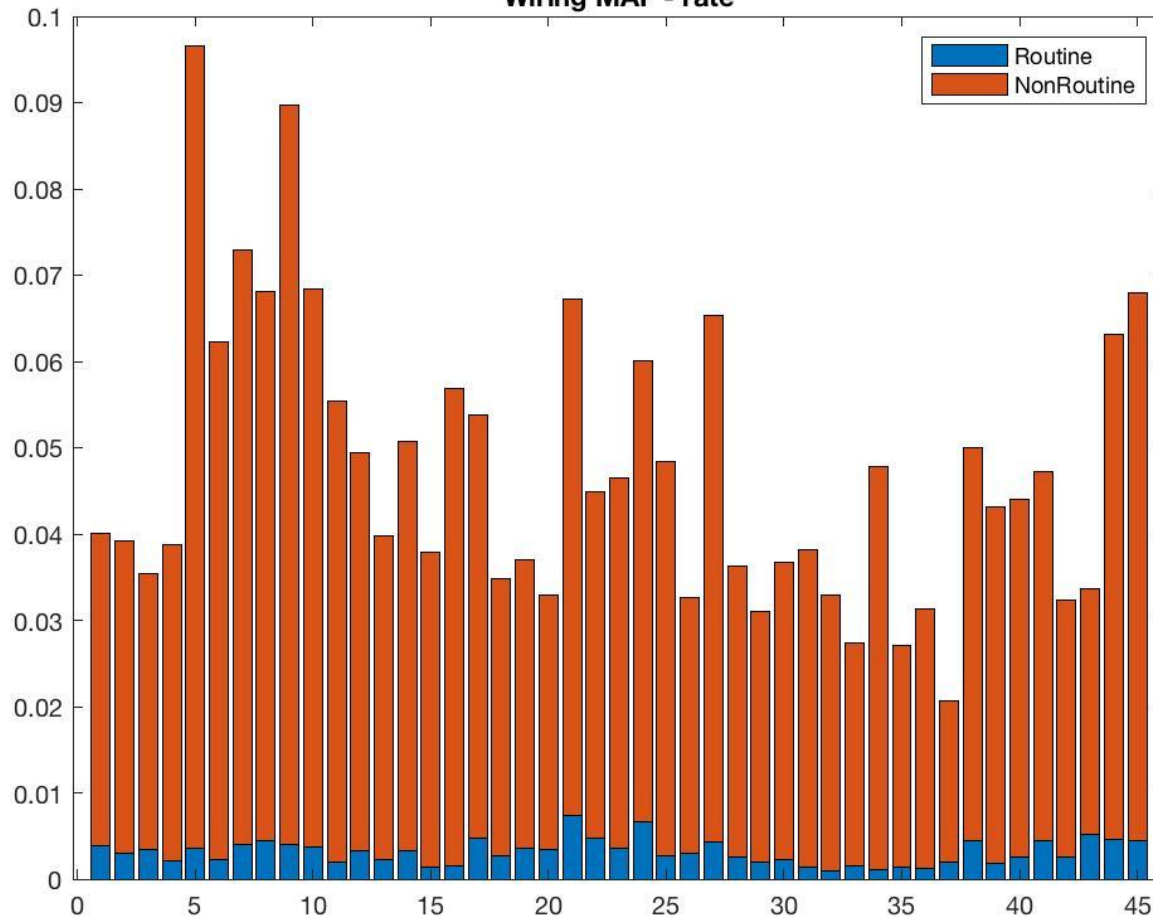


# Jumbos Presentation

# Challenge #1

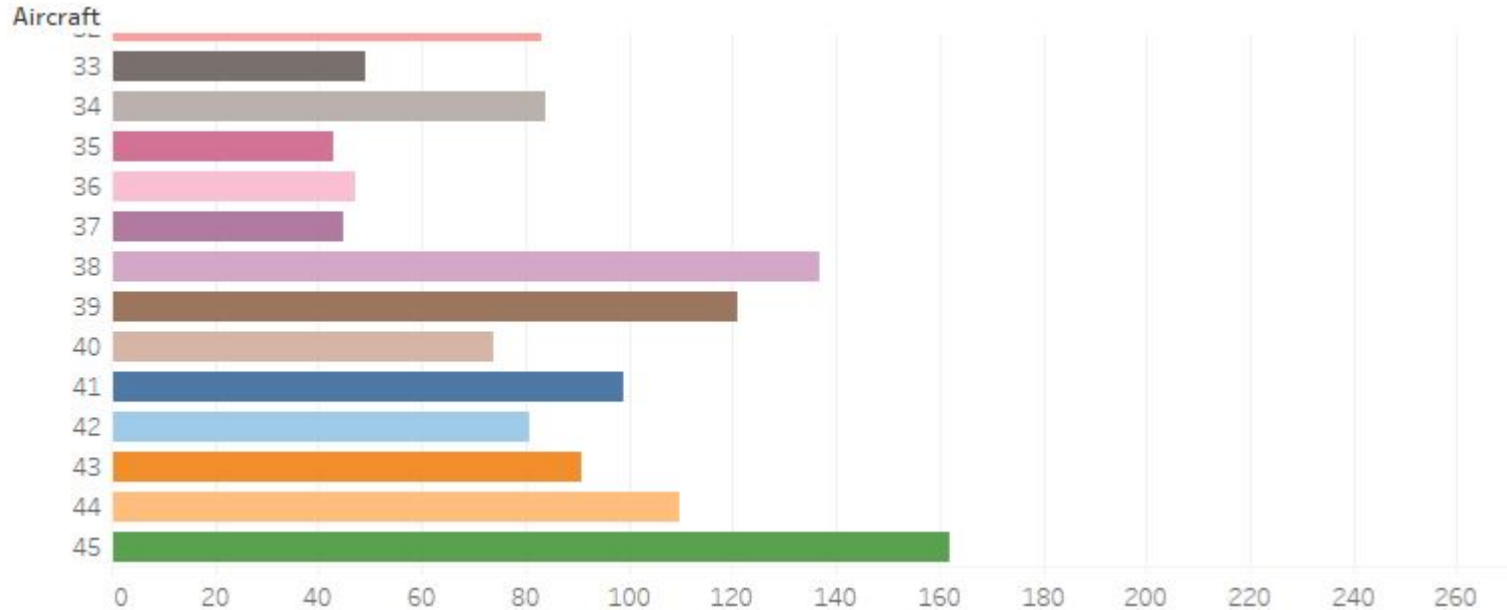
Problem: finding 13 aircraft with wiring issues.

Wiring MAF - rate



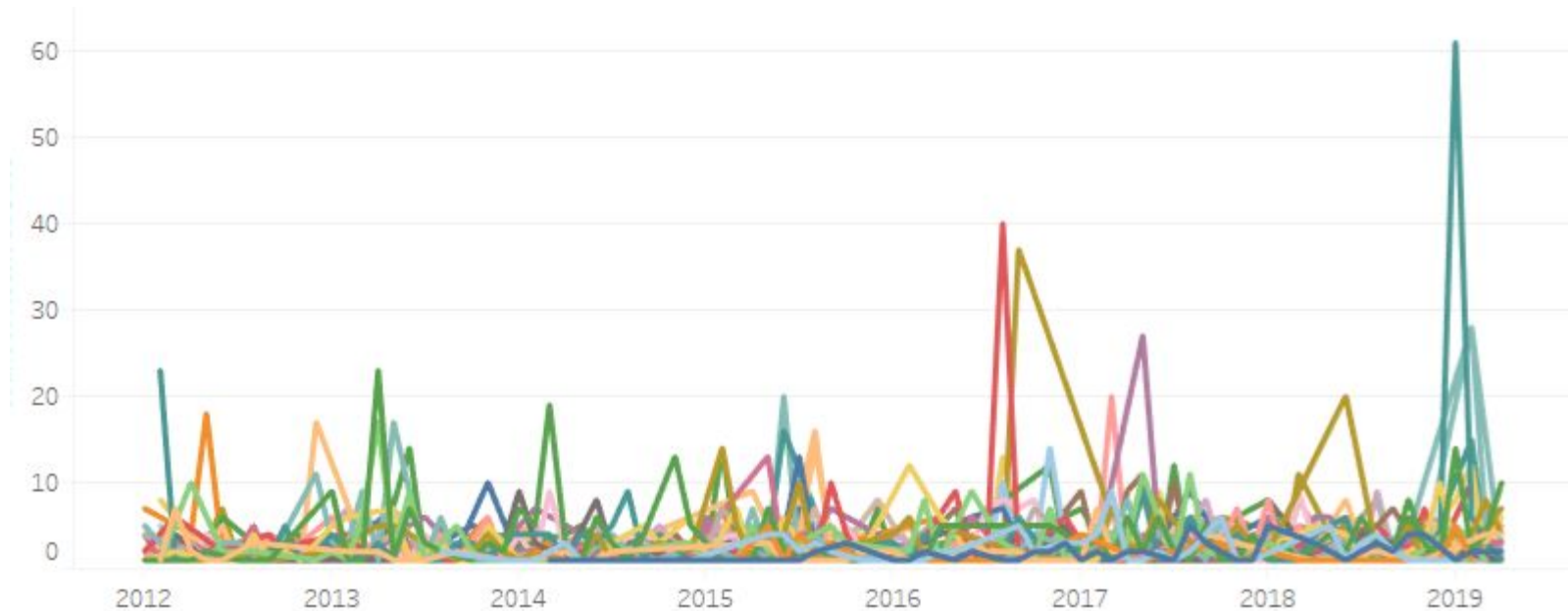
Rate of wiring issues separated by routine and non-routine maintenance for each aircraft

# Number of wiring related problems per aircraft



*Number of problem or correction descriptions containing “wir” or a W in the malfunction code.*

# Time Series Analysis of Wiring Related Problems

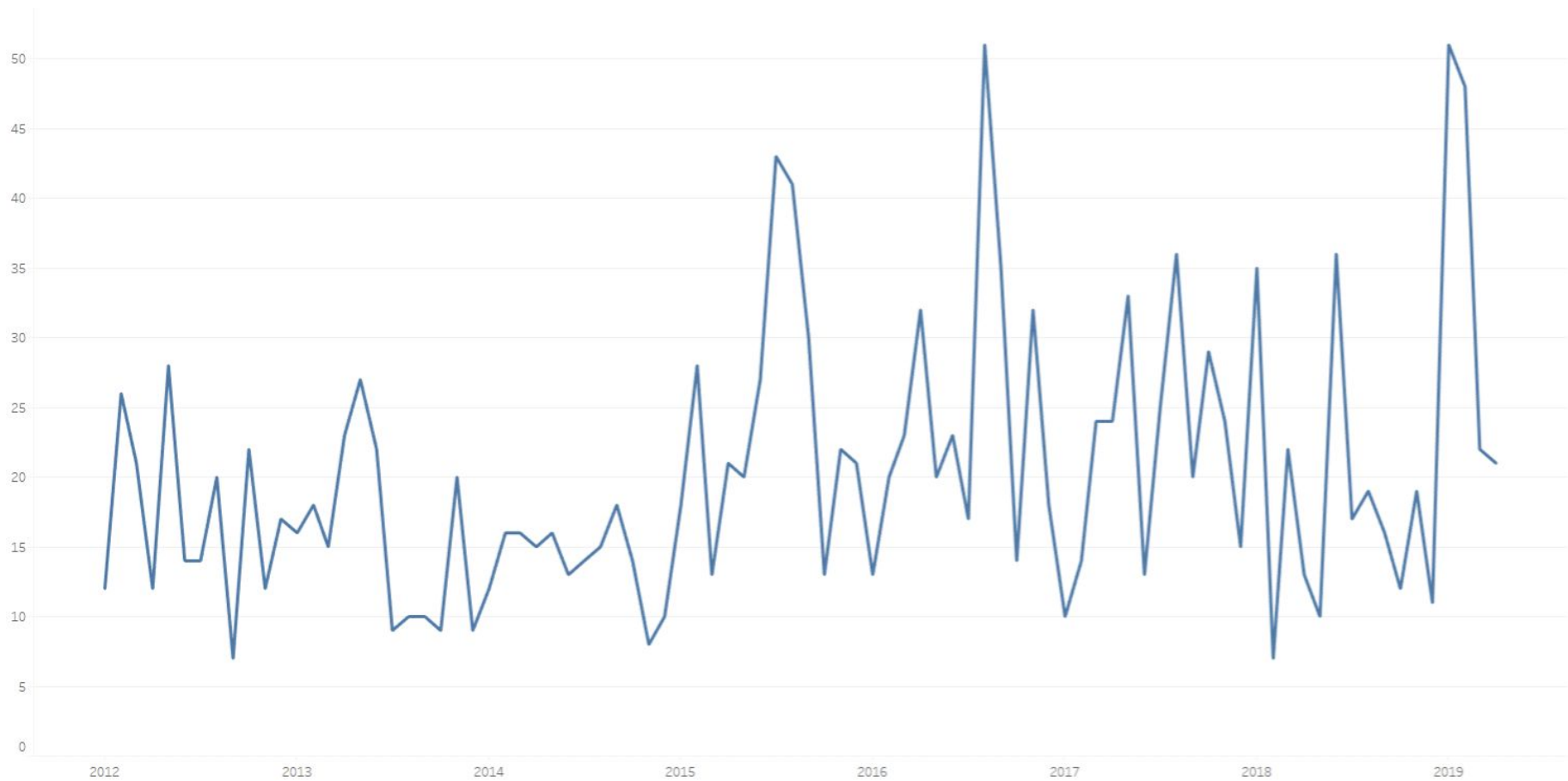


Where each color represents a different aircraft. Aircraft with wiring problems were selected based off of spiking in wiring maintenance.

# Time Series Analysis of Wiring Issues for Aircraft #9



# Number of Wiring Repairs by Month Across all Aircraft

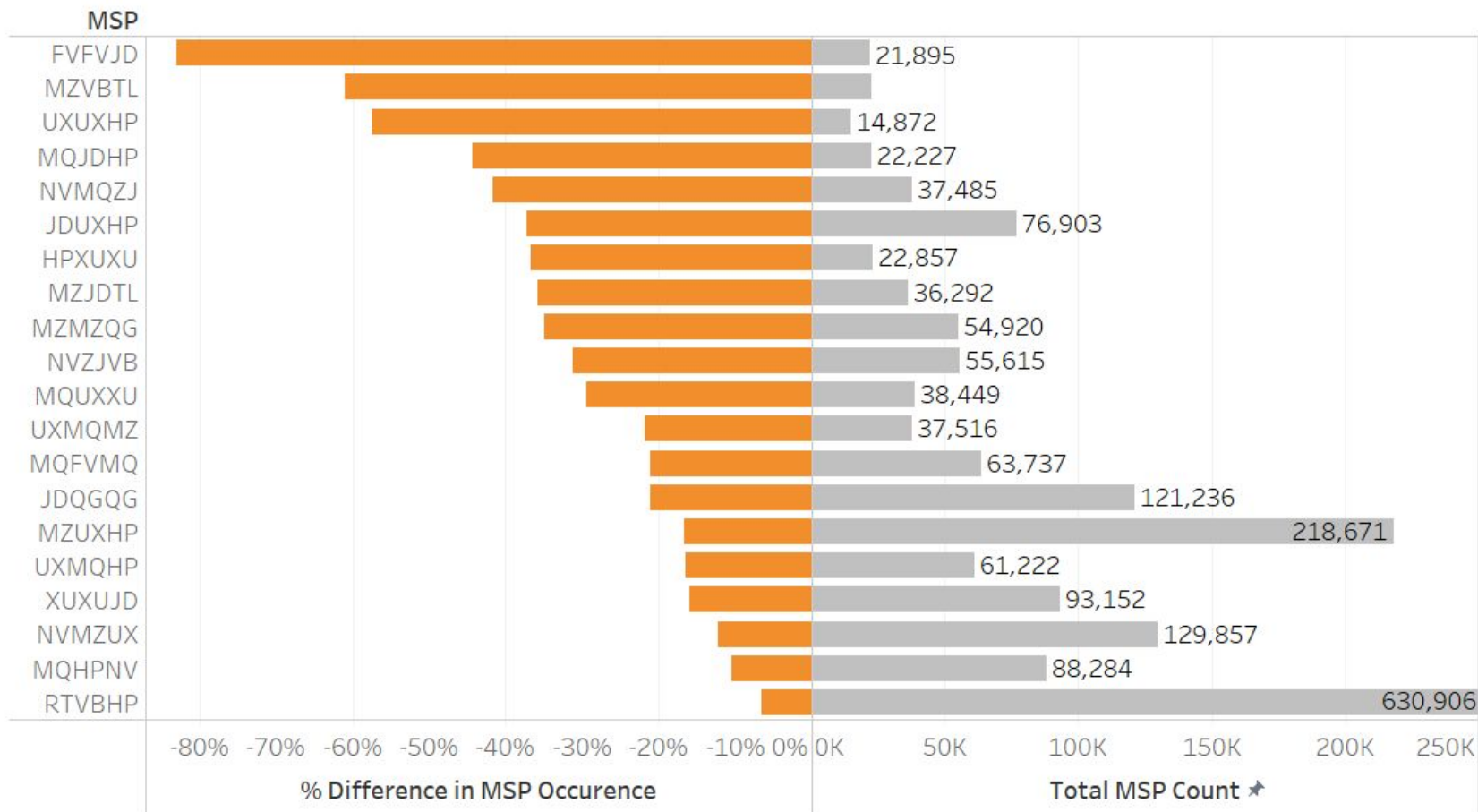


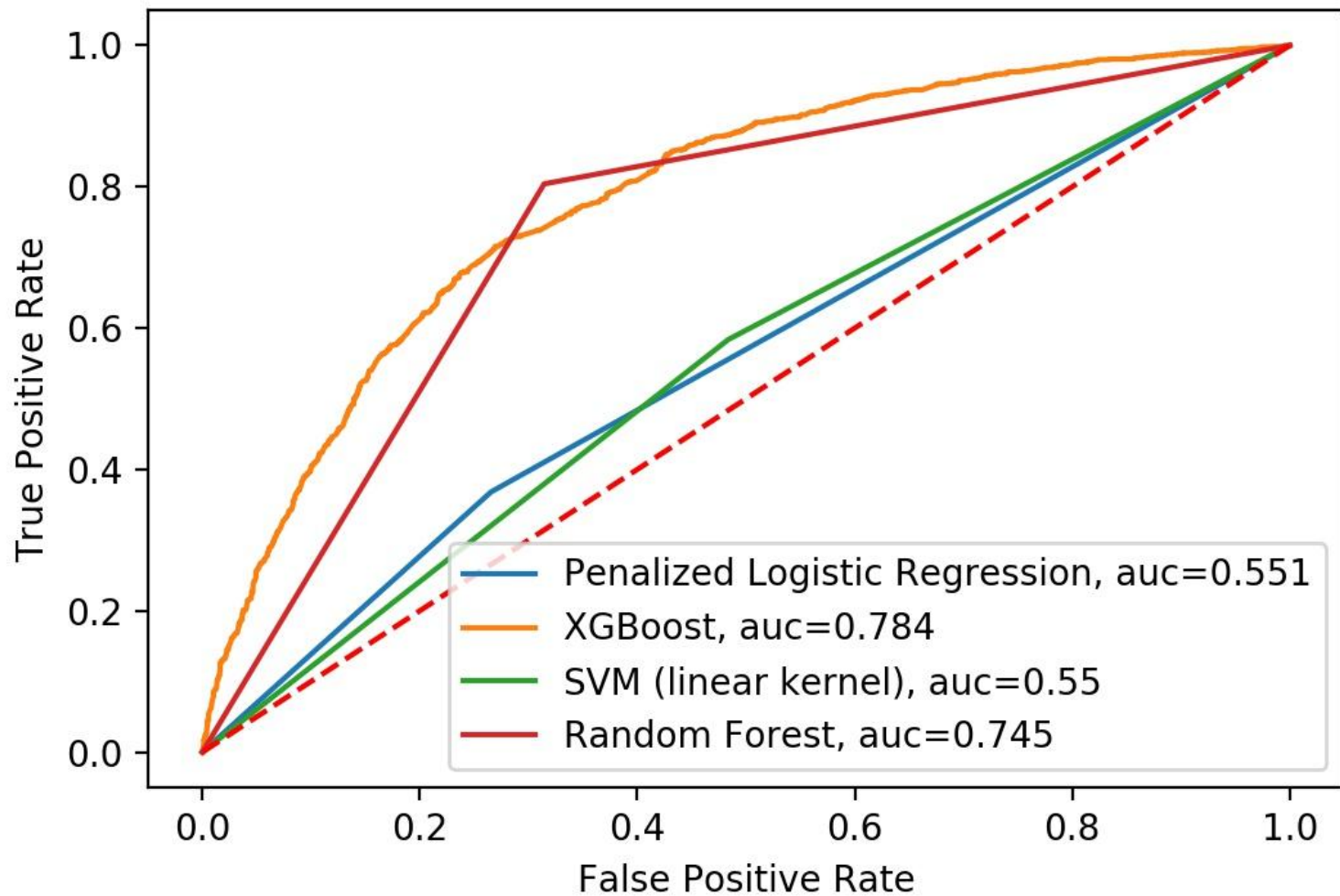
# Challenge #2

Problem: predicting corrosion from MAF and MSP data



# Percentage Change of MSPs from N=10,000 random jobs (Percent Difference 1 month before / after corrosion-related job)





Model	Accuracy	Precision	Recall	F1
Penalized Logistic Regress	55.2%	58.0%	37.0%	45.0%
XGBoost	72.1%	72.0%	73.0%	72.0%
Support Vector Machines	55.0%	56.0%	52.0%	54.0%
Random Forst	74.5%	72.0%	80.0%	76.0%