



Capstone Project:
Predictions of Service Requests Processing Periods
Nadia Buksa | BrainStation, Data Science Bootcamp Apr - Jul 2022

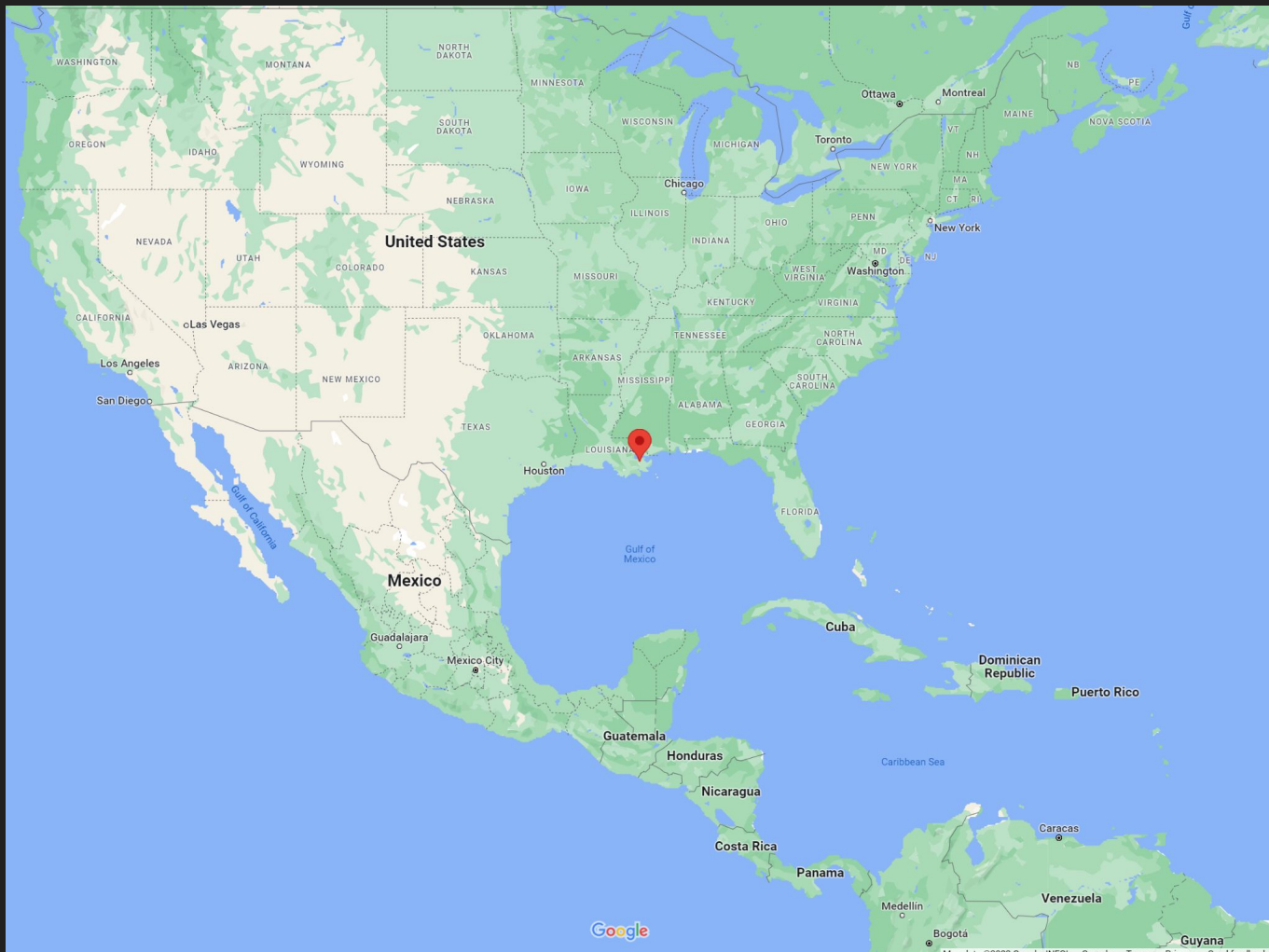


Data.gov
U.S. Government's
open data

New Orleans, LA

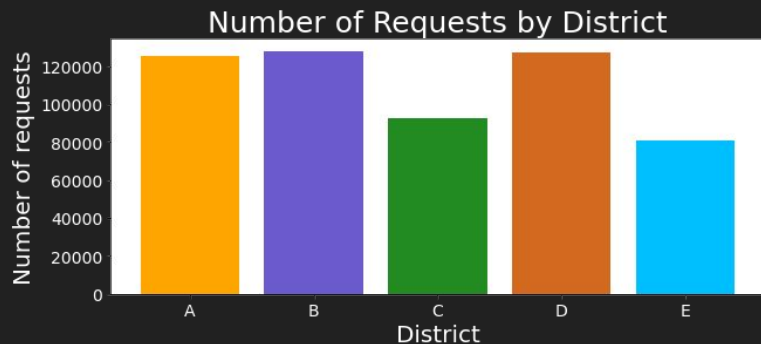
NOLA

2012 - 2022



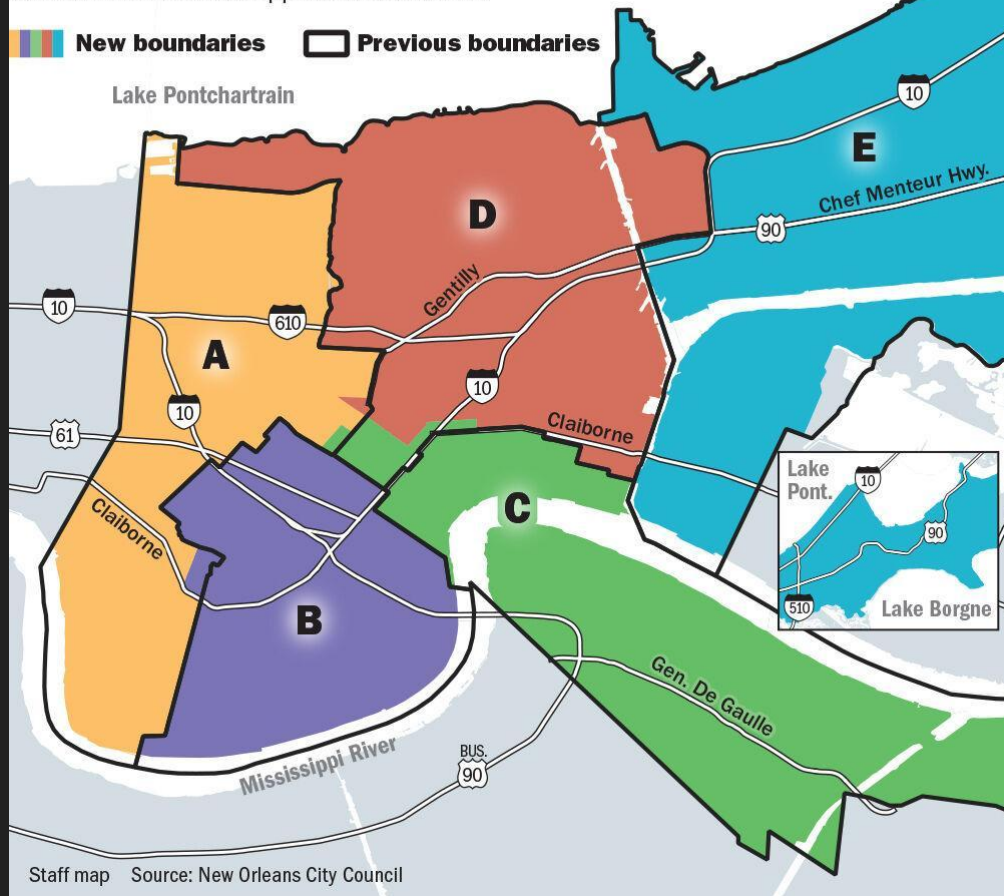


*John Hartman
New Orleans, The Mississippi and Lake Pontchartrain*



NEW ORLEANS CITY COUNCIL DISTRICTS

New district boundaries approved on March 16





ABANDONED VEHICLES



EMS



HEALTH-RELATED REQUESTS



LIGHTS/SIGNS/SIGNALS



MOSQUITO, TERMITE, &
RODENT CONTROL



MAYOR'S REQUESTS



PARKS & PARKWAYS



PROPERTY MAINTENANCE



ROADS/DRAINAGE



TAX & REVENUE



TAXI ISSUES



TRASH/RECYCLING



YOUR HOME FOR NON-EMERGENCY SERVICES

Mission Statement

The mission of NOLA-311 is to enable greater efficiency, accountability and transparency into non-emergency city services while maintaining the highest possible level of customer service

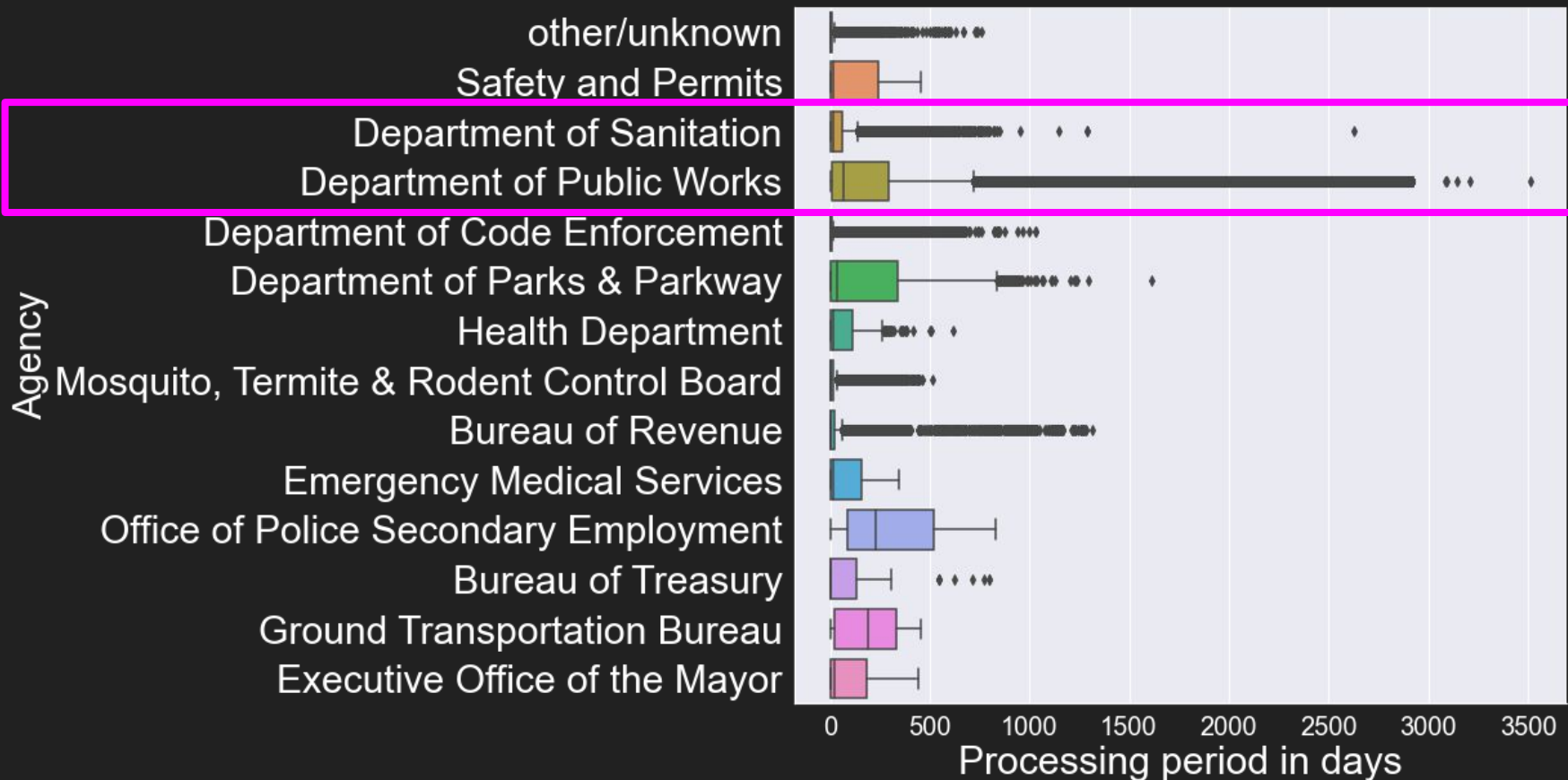
Business Problem

Predict the number of days required to resolve a service request

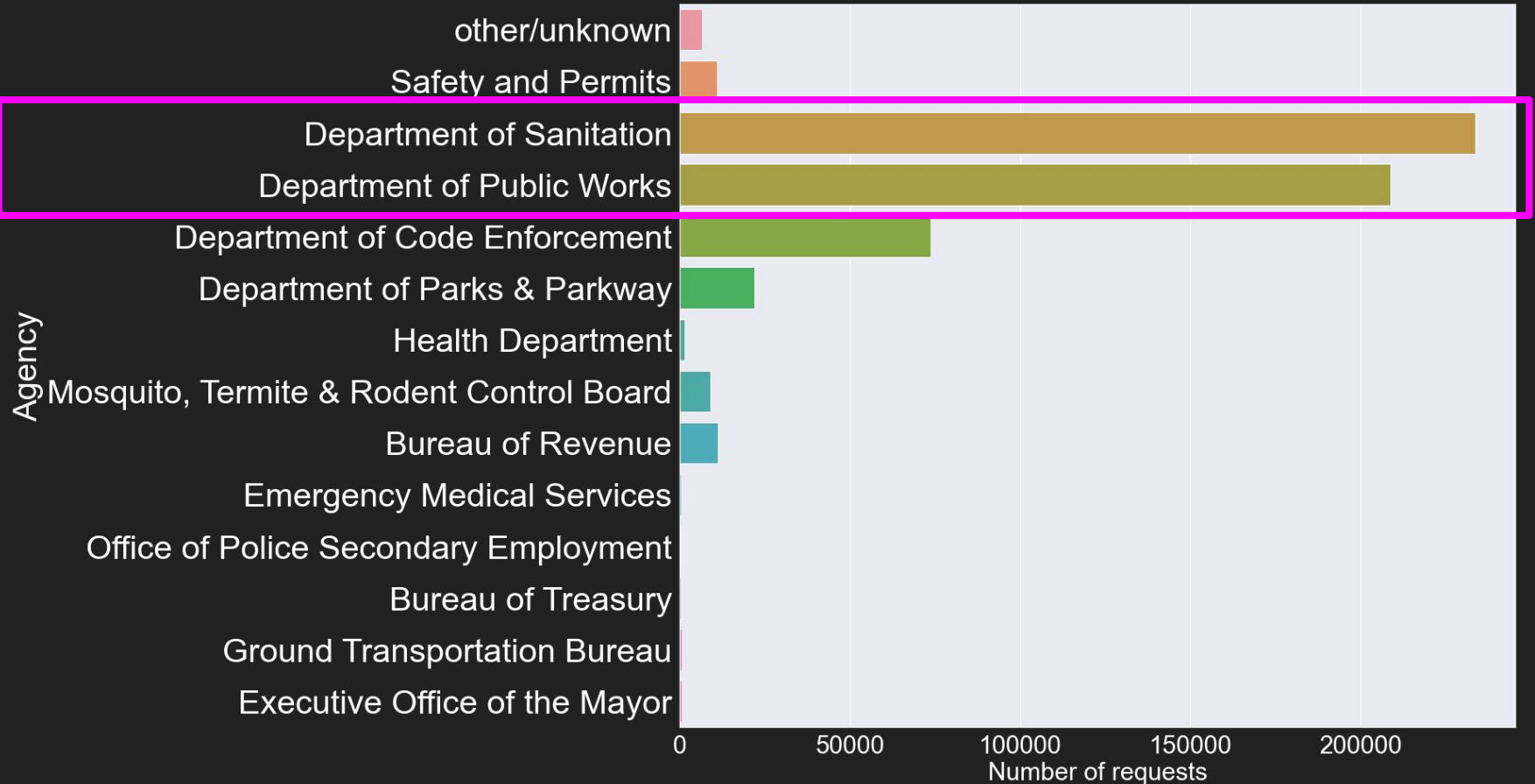
What is the Value?

1. Enhancement of customer satisfaction through setting accurate expectations
2. Increased efficiency through well-planned resource allocation

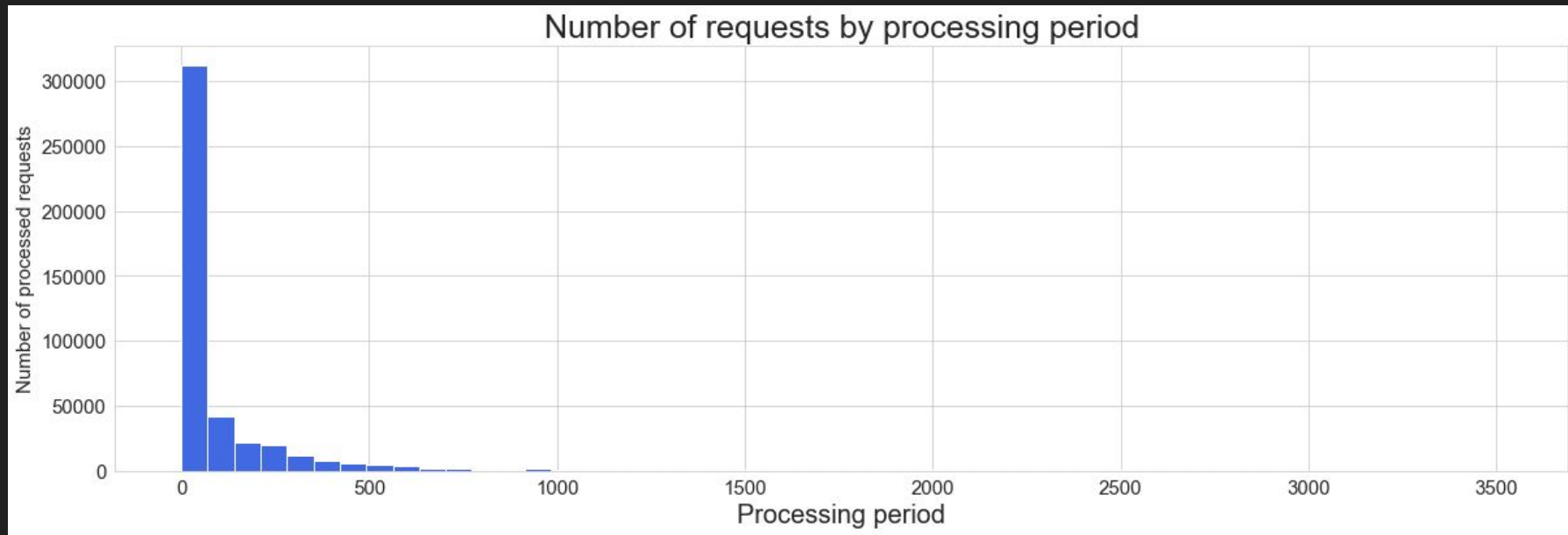
Distribution of processing periods by length



Number of requests by Agency

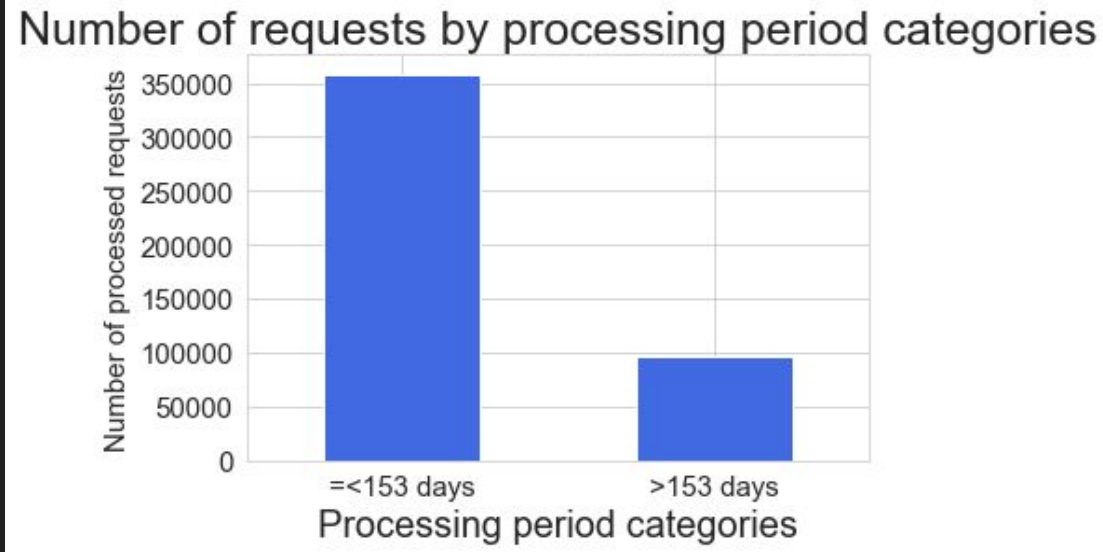


Target Variable: processing_period_days



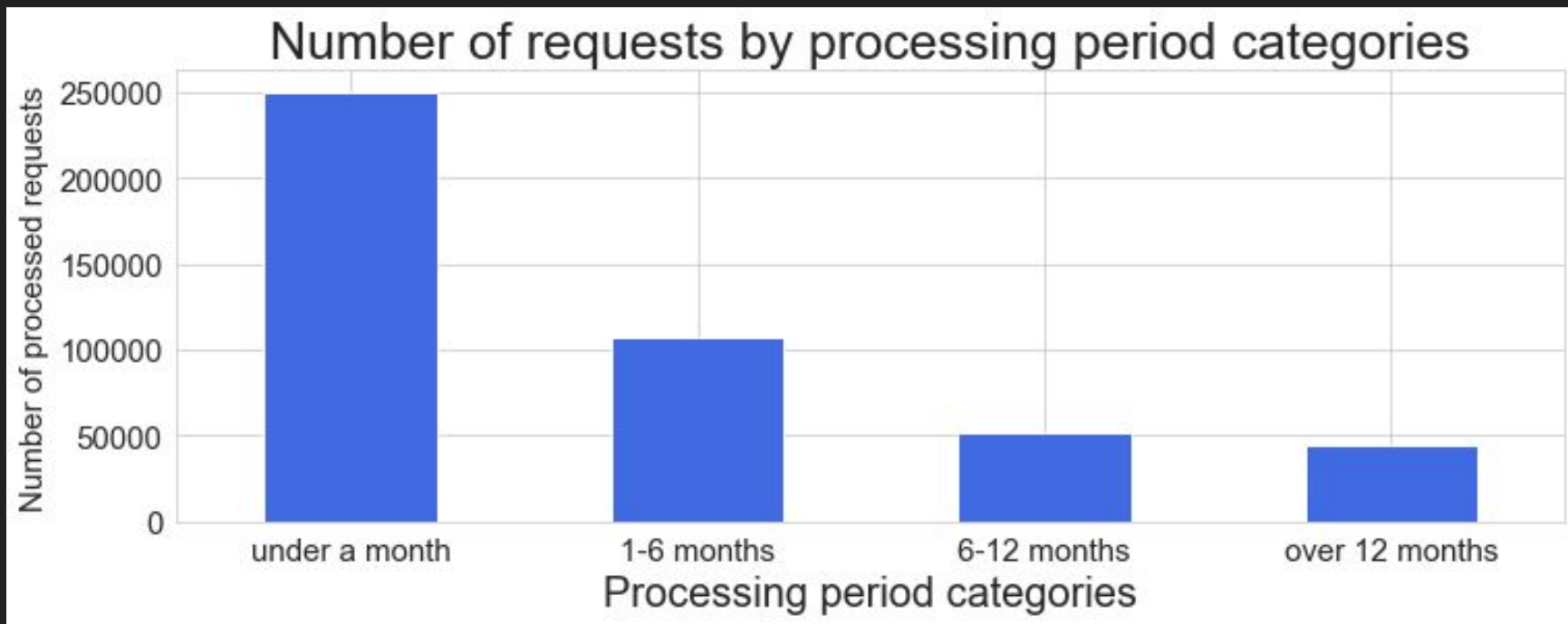
Best score: 59%

Model: Decision Trees Regressor



Best score: 90%

Model: Decision Trees Classifier, KNN



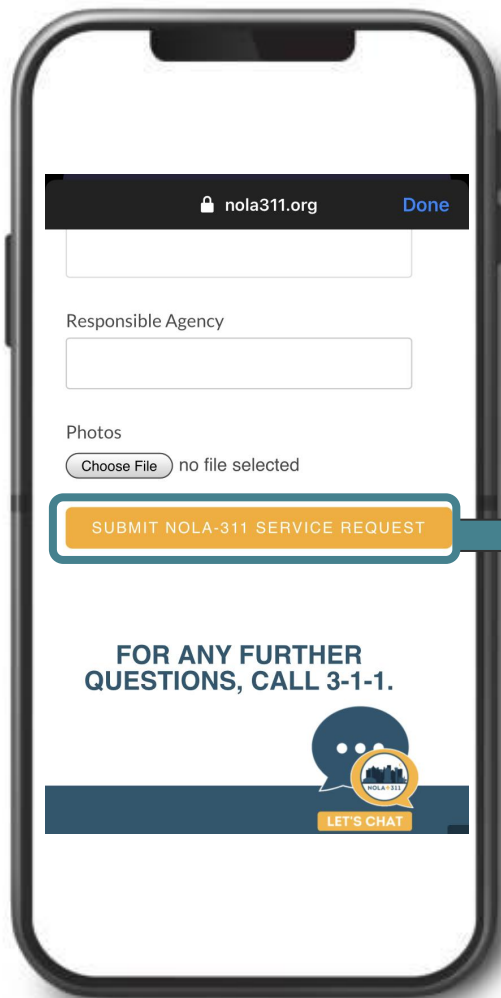
Best score: 91%
Model: KNN

Other tools used: variance threshold, multicollinearity check,
MinMax and Robust scaler, GridSearch, SMOTE analysis

1. I recommend that you look into challenges of Department of Public Works. They are your second busiest Agency, and they are having many requests that take over several years to resolve.
2. I suggest using my predicting model to build an automation into your online Service Request form. When a person hits “Submit Request”, they will get a message with an estimate on how quickly they can expect their request to be resolved.



NEXT STEPS



A smartphone screen showing the nola311.org website. The browser address bar displays 'nola311.org' and a 'Done' button. The form includes a text input field, a 'Responsible Agency' label with a text input field, a 'Photos' section with a 'Choose File' button and 'no file selected' text, and a prominent orange 'SUBMIT NOLA-311 SERVICE REQUEST' button. Below the form, it says 'FOR ANY FURTHER QUESTIONS, CALL 3-1-1.' and features a chat icon with a 'LET'S CHAT' button.

nola311.org Done

Responsible Agency

Photos

Choose File no file selected

SUBMIT NOLA-311 SERVICE REQUEST

FOR ANY FURTHER QUESTIONS, CALL 3-1-1.

LET'S CHAT



Thank you!

We are working
hard to resolve
your request in

...
days

-NOLA311-



Thank You !