Analysis of Sioux Falls Restaurants

Predictive uses for Sioux Falls restaurants

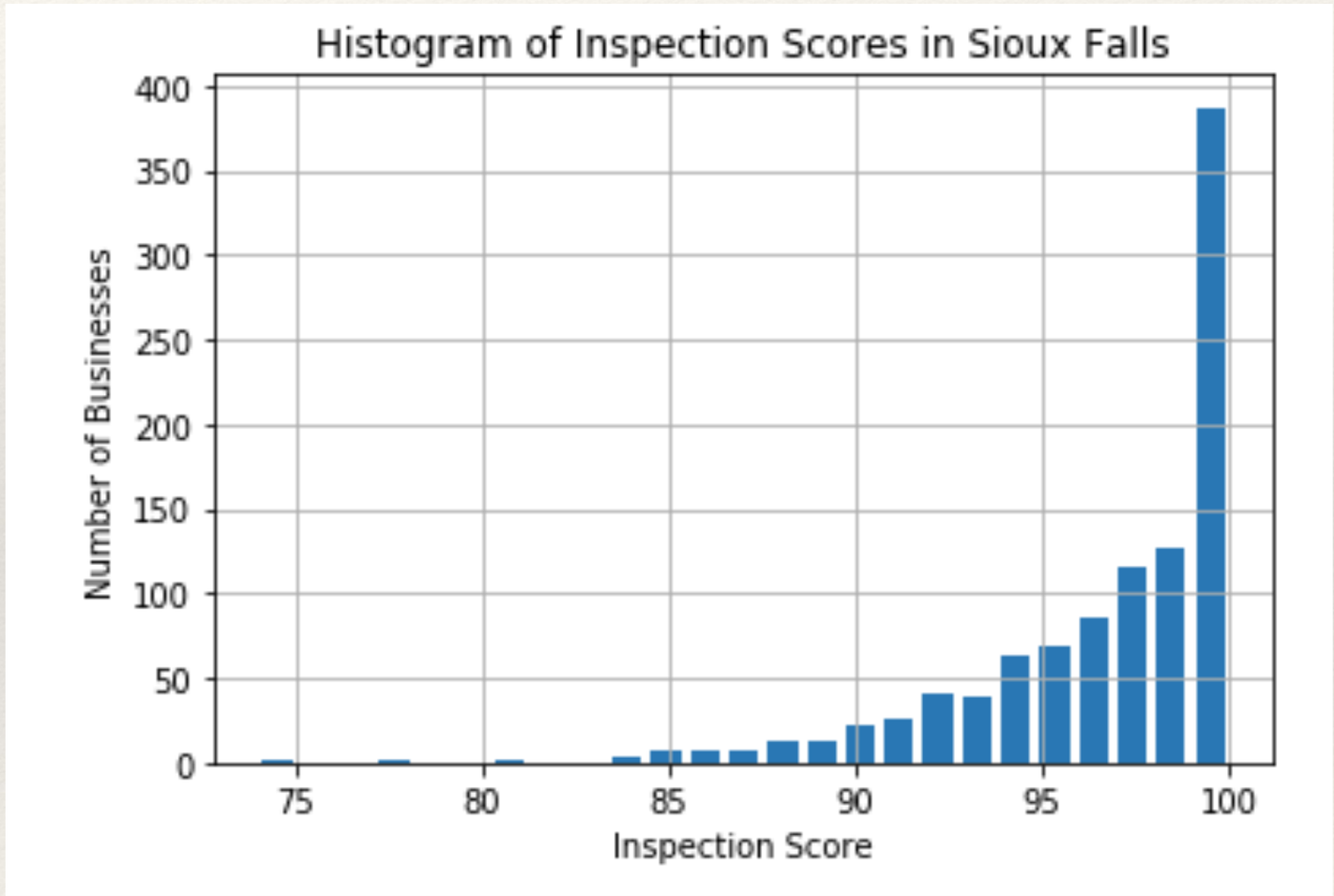
- Trends in inspection scores vs geographic location
  - Does the location affect inspection scores?
- Where is the best location for a new restaurant or relocation of a previously existing restaurant?

Data Acquisition and Cleaning

- Sioux Falls inspections obtained from:
- http://webapps.siouxfalls.org/inspections/restaurants.aspx
- After web scraping, duplicates were dropped, data was organized in descending order.
- Raw data contained 1,047 rows and 4 features.
- After merging with latitude and longitude data frame and dropping duplicates or non usable data, the data frame contained 940 rows and 7 features.

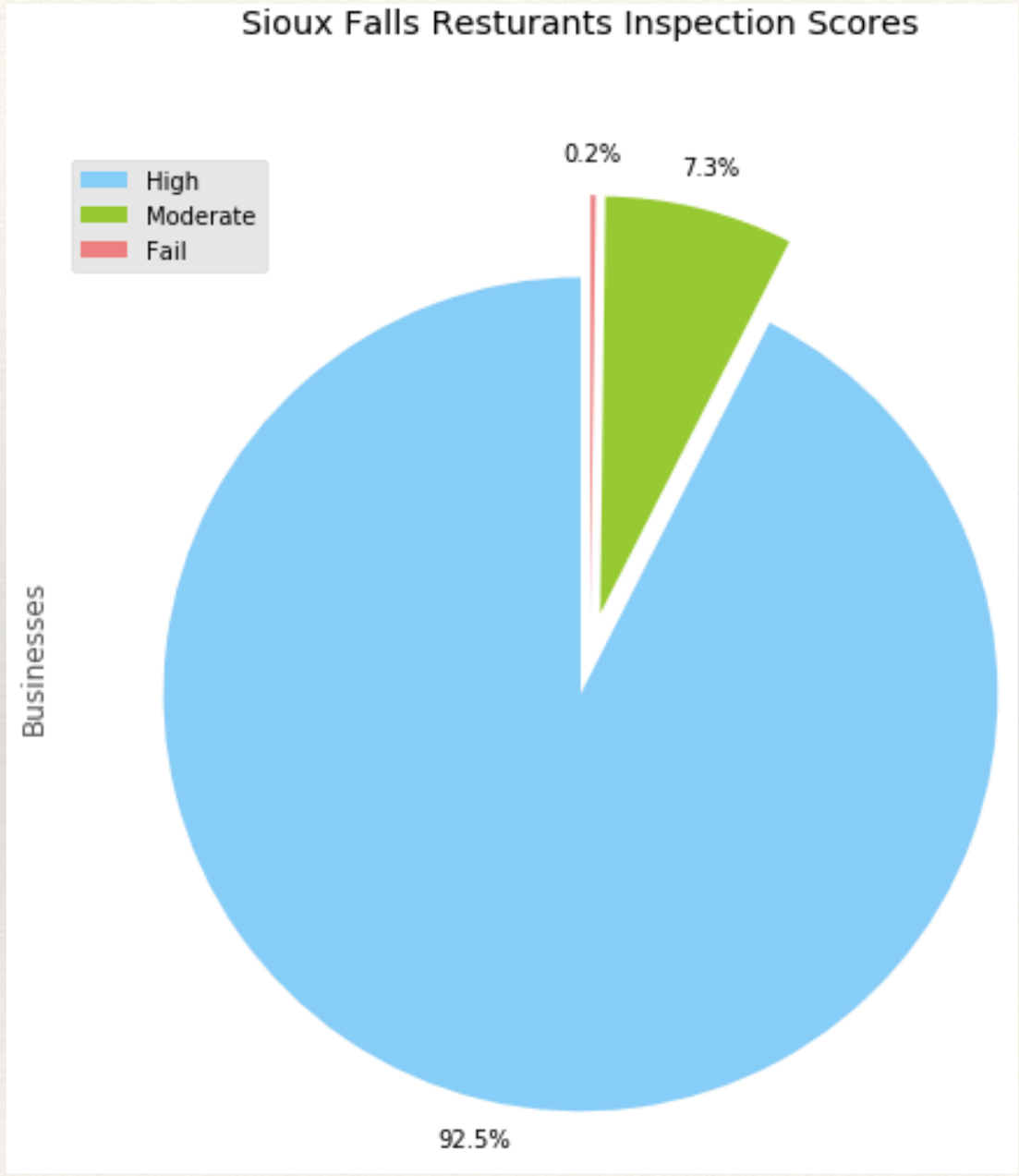
Distribution of Inspection Scores

- Scores reported over a duration of 30 days
- High percentage of businesses pass
- 2 did not (cut score is 80)



Percentage Breakdowns

- 3 Categories for scores
  - High (90 on up)
  - Midrange (80 to 89)
  - Fail (Below 80)



High scores over the previous month

```
[[  0   5]
 [  0 142]]
             precision    recall  f1-score   support

        2.0       0.00      0.00      0.00         5
        3.0       0.97      1.00      0.98       142

avg / total       0.93      0.97      0.95       147
```

- f1-score of 95%
- Values of 2 and 3 are both passing.

Conclusion

- Model predicted very well.
- Future monthly inspections should be used to verify models consistency.
- Low amount of inspection failures created very skewed data.