

Secondary Market Analysis for LEGOs



Phillip Busko
&
Nathan Venos

Introduction To Our Product

Are you a LEGO enthusiast?

- AFOL (Adult Fan of Legos) with a budget
- Parent of an enthusiast

Our Solution:

- Buy and enjoy new LEGO sets
- Sell them at cost, or a profit



Algorithm Background

Data Sources

- brickset.com
- Kaggle Competition

Data Traits

- Years span 1984 to 2016
- Number of Sets: 3,800
- Adjusted for inflation
- Profitability:
Used_Price - Store_Price

Data Elements

Year
Theme
Total Parts
Different Parts
Part Category
Different Colors
Primary Color
Secondary Color

Our Service: Prediction

You Provide

Set Number
8873
8913
7888
60095
10185



We Return To You

Set Number	Predict
8873	Nope
8913	Buy!
7888	Buy!
60095	Nope
10185	Buy!

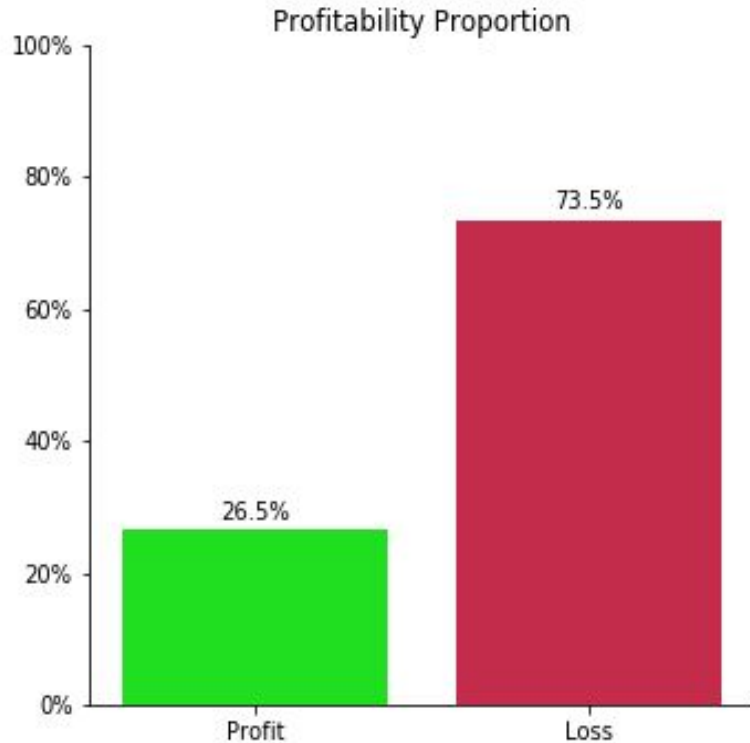
Prediction Accuracy

- Do Buy: 71.3%
- Don't Buy: 84.0%

Price Point

- First 5 predictions: \$2
- Each additional 5: \$1

Roadblocks & Caveats



- Majority not Profitable after Inflation
- Importance of Release Year
- Lack of Sentiment Data at Release
- Lots of Mutual Relationships in Data

Future Work

- Incorporate Additional Data
- Identify Novel Groupings of Related Part Categories
- Improve Identification of Most Important Features
- Consider Additional Prediction Techniques

Questions

