

# The Spectrum Data Challenge!

- 1. India's Spectrum allocation analysis
- 2. Population covered by various spectrum ranges in various regions
- 3. Prediction of future spectrum prices.

We were given a database containing data from DotEcon’s Spectrum Award Database, on various spectrum allocations done worldwide from 1994 until 2020. For India's 3G spectrum data, we analyzed all the features, figured out the important features of a spectrum, and then visualized these features. After analyzing and visualizing these features by relating them, we tried to predict prices for next year.

## Population vs Winner

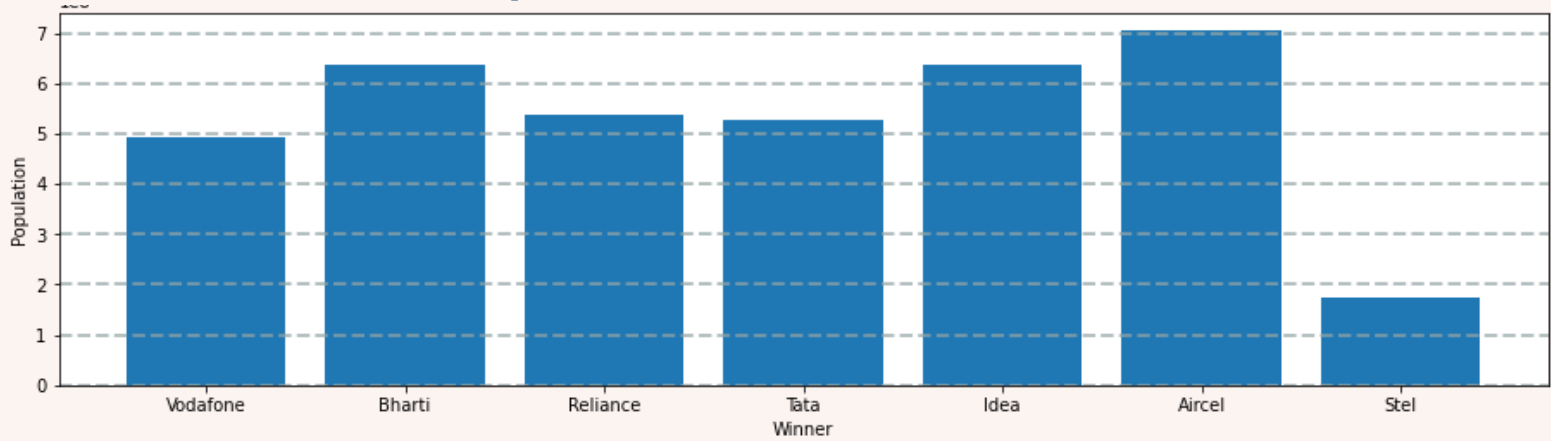


Fig : Overall population comaprison covered by each winner

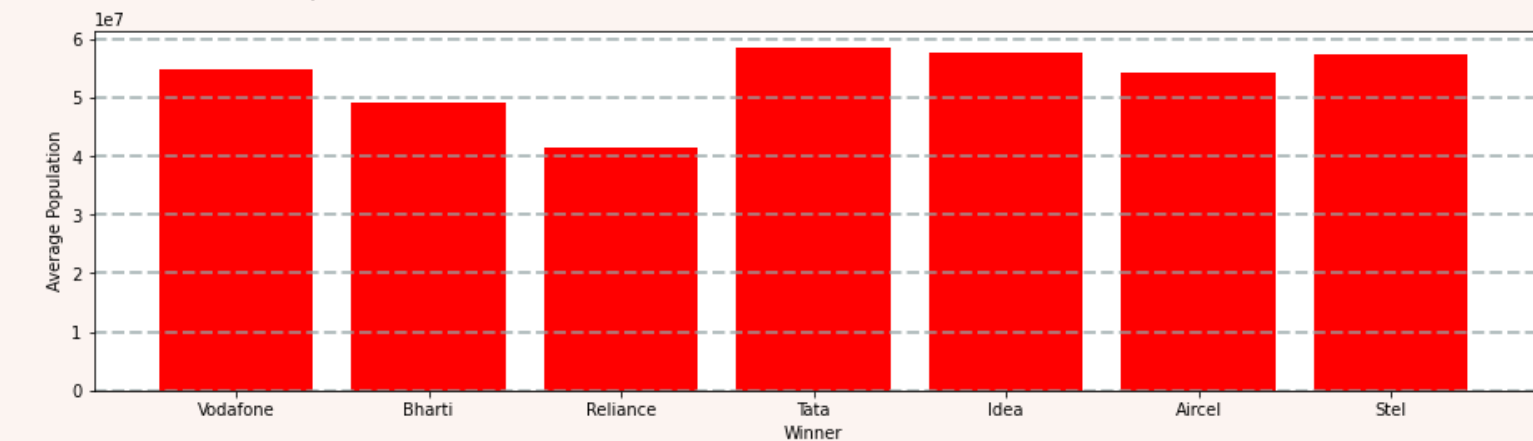


Fig : Average population comparison covered by each winner

## Money Spent vs Winner

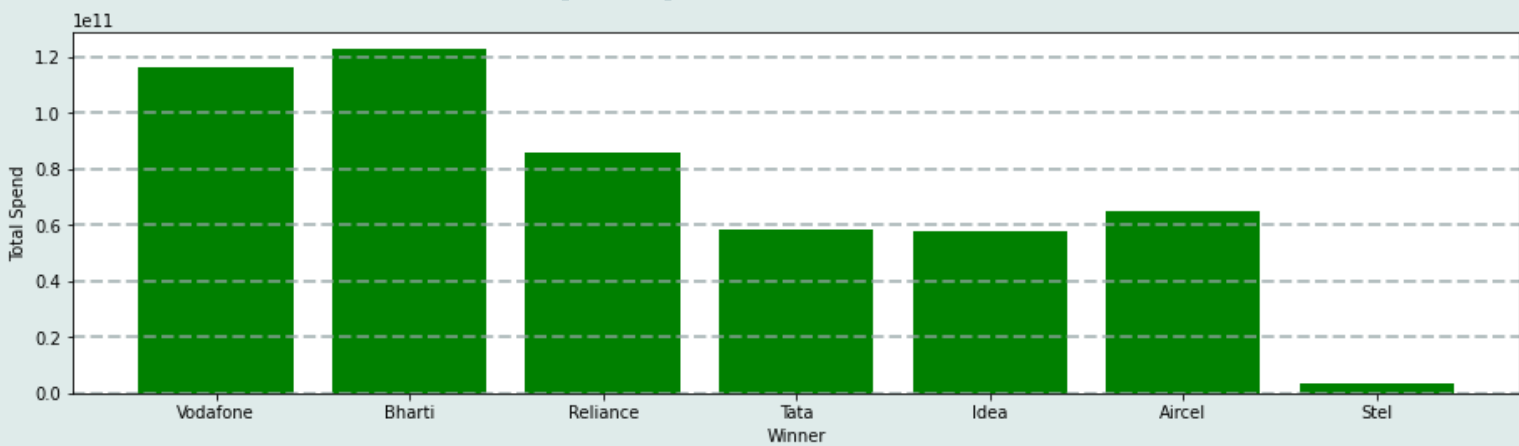


Fig : Total money spent by each winner on the spectrums they bought

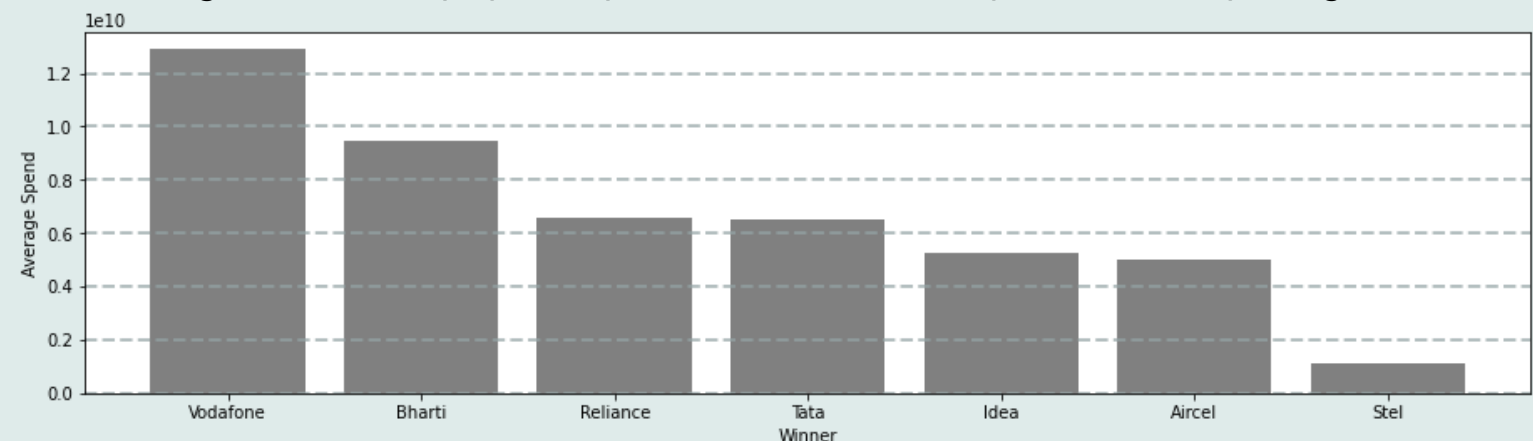


Fig : Average money spent by each winner on the spectrums they bought

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SCAN ME

## GROUP 20

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## Relativity between different features

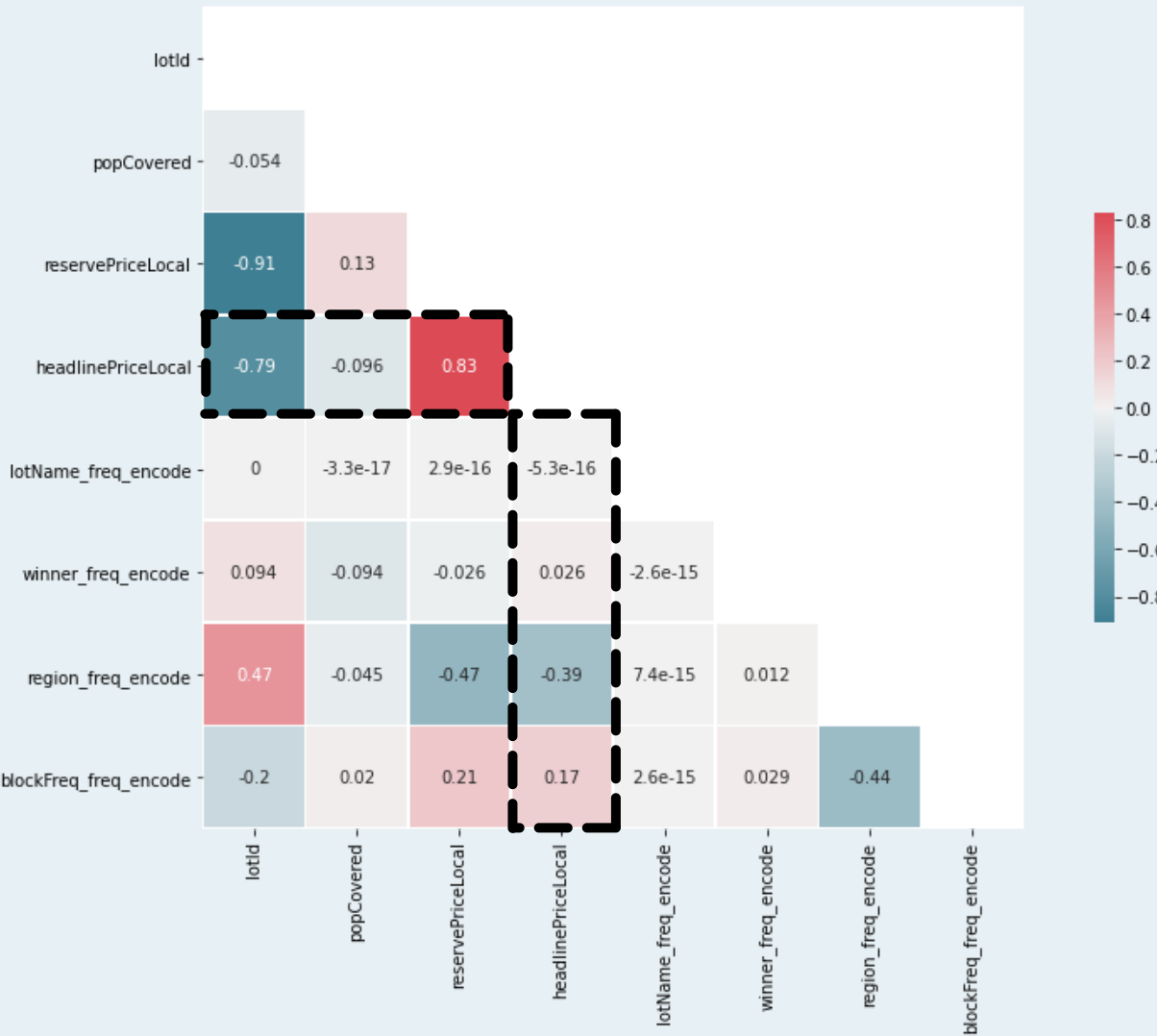


Fig: Represents the relation between different features. Here Highlighted region represents the relation of features to the Headline Price of Spectrum.

## Comparing different feature's relativity with Headline Price of Spectrum

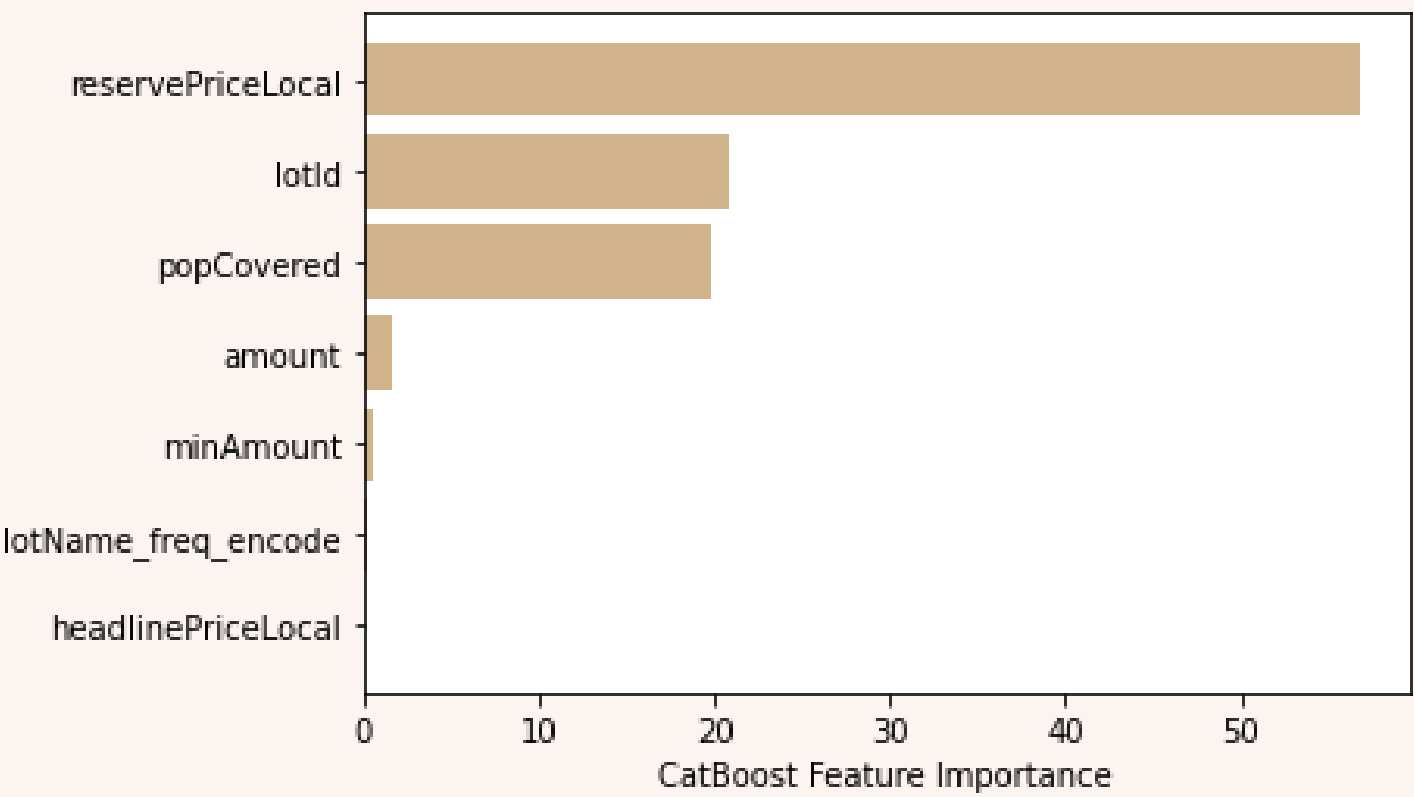


Fig: Shows comparison of different feature's relativity with Headline Price of Spectrum

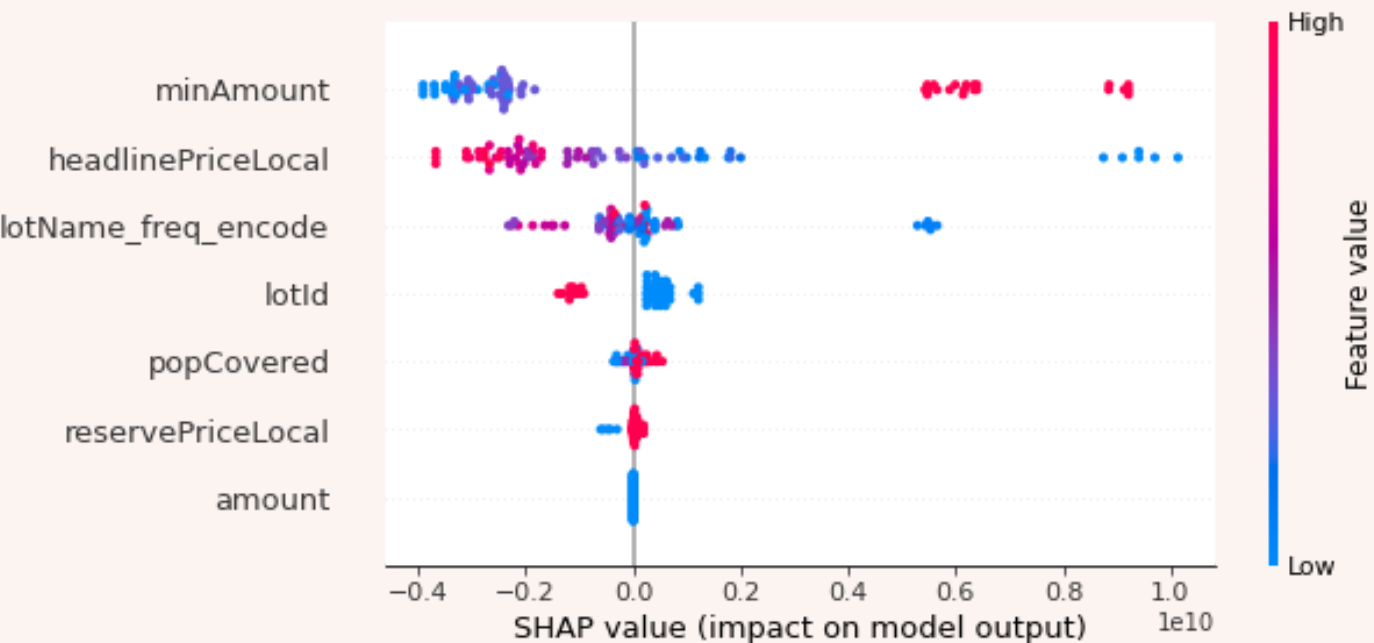


Fig: SHAP matrix comparison of different feature's relativity with Headline Price of Spectrum