Salary predictor for cities

This is my city: how much should I earn?

Features considered - sources

Estimated Population (2017-07-01)

Land Area (2016-01-01)

} US Census Bureau

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Things to do → tripadvisor.com

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Rent appartment → apartmentlist.com

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Murder rate

Assault rate

Median Income

} city-data.com

Method

272 data points

Method

272 data points

Polynomials up to order 4

Method

272 data points

Polynomials up to order 4

Ridge, Lasso and Elastic Net with CV

Method

272 data points

Polynomials up to order 4

Ridge, Lasso and Elastic Net with CV

Mean square error of test as indicator

Method

272 data points

Polynomials up to order 4

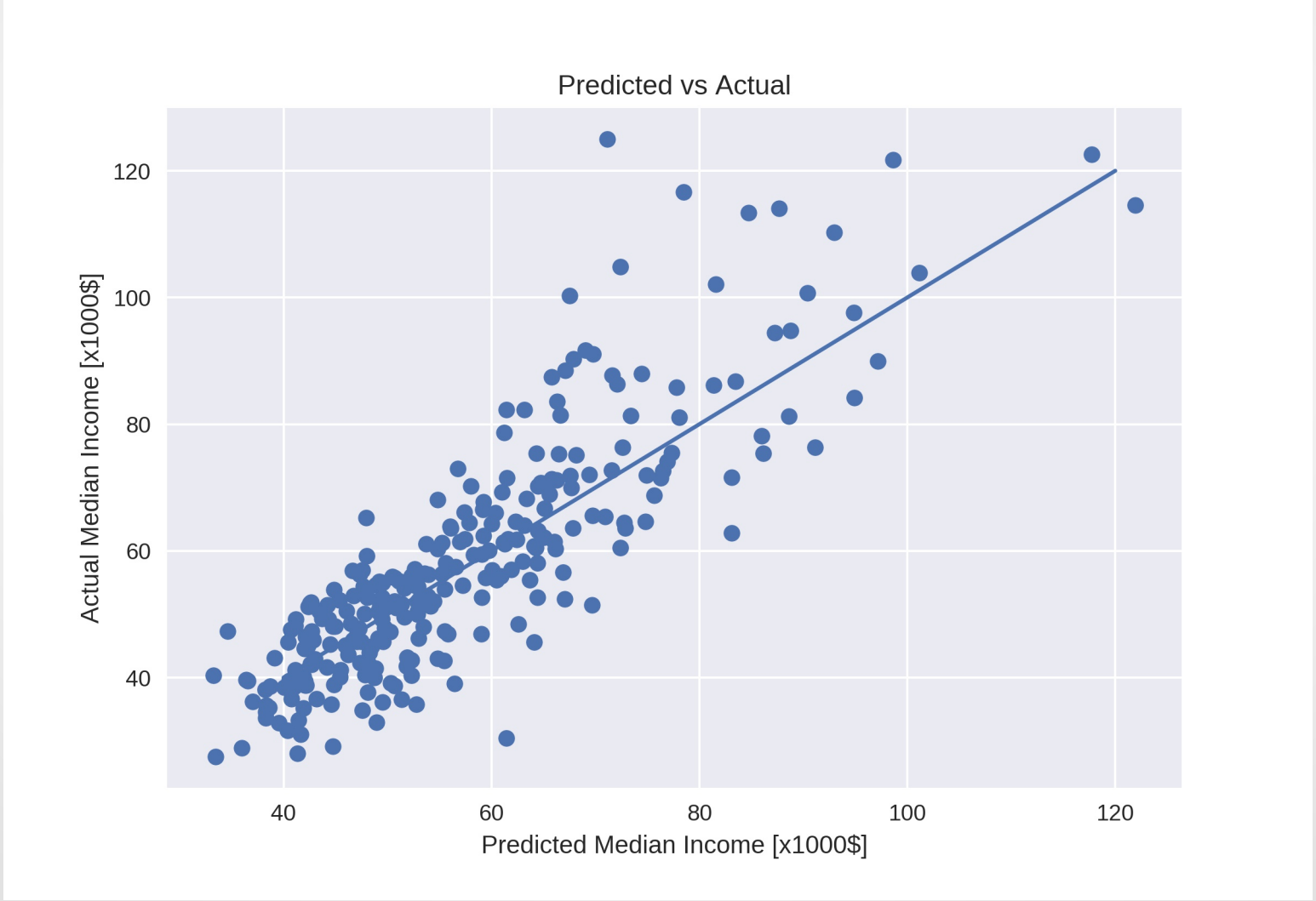
Ridge, Lasso and Elastic Net with CV

Mean square error of test as indicator

Learning curves used to check overfitting

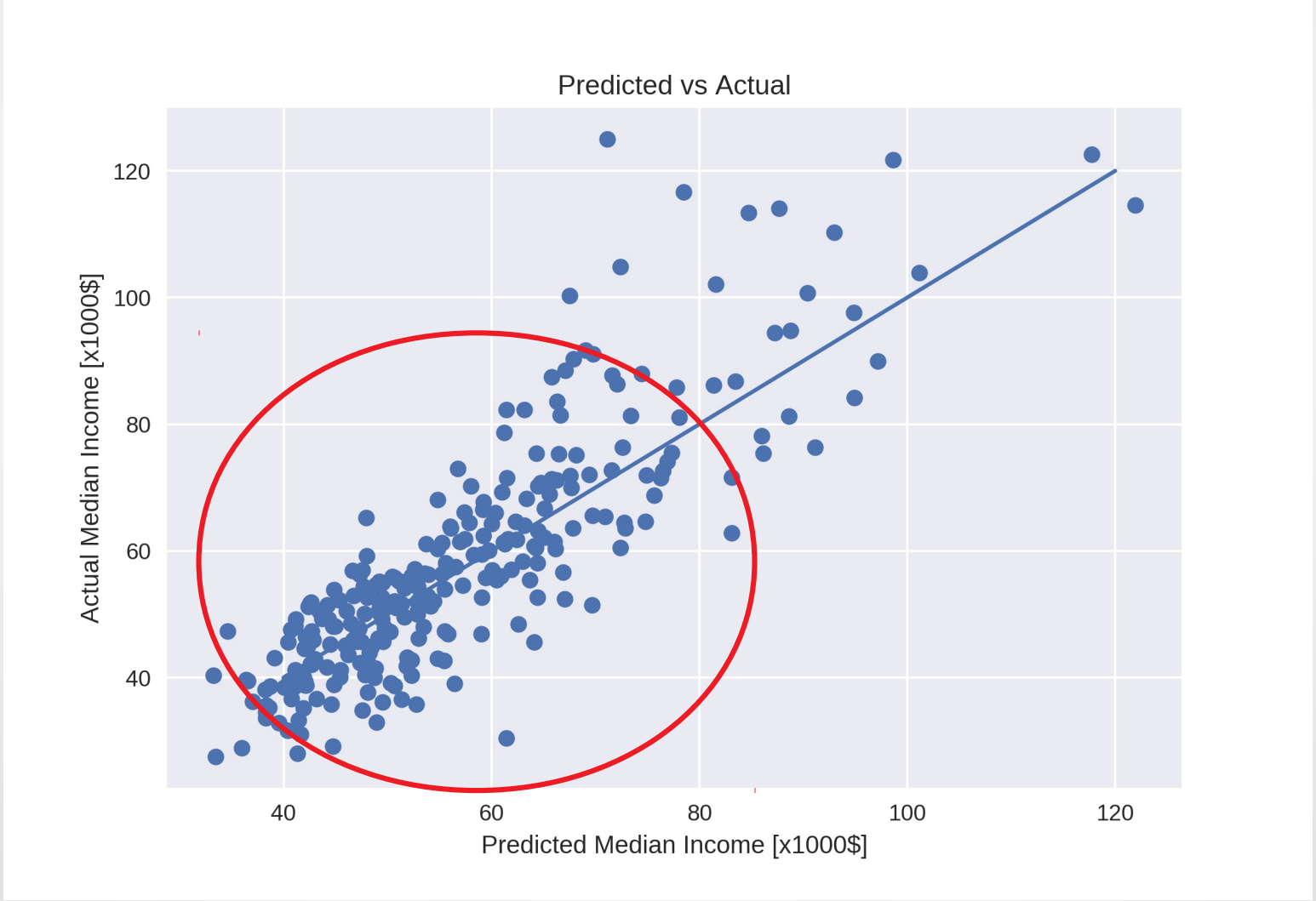
Our chosen model

Lasso regularization polynomial degree 2



Our chosen model

Lasso regularization polynomial degree 2



Influence of features

Population: high population - lower salaries

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Area: large cities - higher salaries

Influence of features

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Area: large cities - higher salaries

Things to do: interesting cities – higher salaries

Influence of features

Population: high population - lower salaries

Area: large cities - higher salaries

Things to do: interesting cities – higher salaries

Rent price: high rent – high salaries

Influence of features

Population: high population - lower salaries

Area: large cities - higher salaries

Things to do: interesting cities – higher salaries

Rent price: high rent – high salaries

Murders and Assaults: high crime – low salaries

Conclusion and outlook

Predictor works best for medium-low salaries

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Most important: things to do, rent prices and crime

Conclusion and outlook

Predictor works best for medium-low salaries

Most important: things to do, rent prices and crime

More features can be included in future models

Conclusion and outlook

Predictor works best for medium-low salaries

Most important: things to do, rent prices and crime

More features can be included in future models

Extension to cities around the world

Coefficients

```
Index(['Population', 'Area', 'Things_to_do', 'Rent', 'Murders', 'Assaults']
```

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