



Classifying Health Insurance Rate Increases

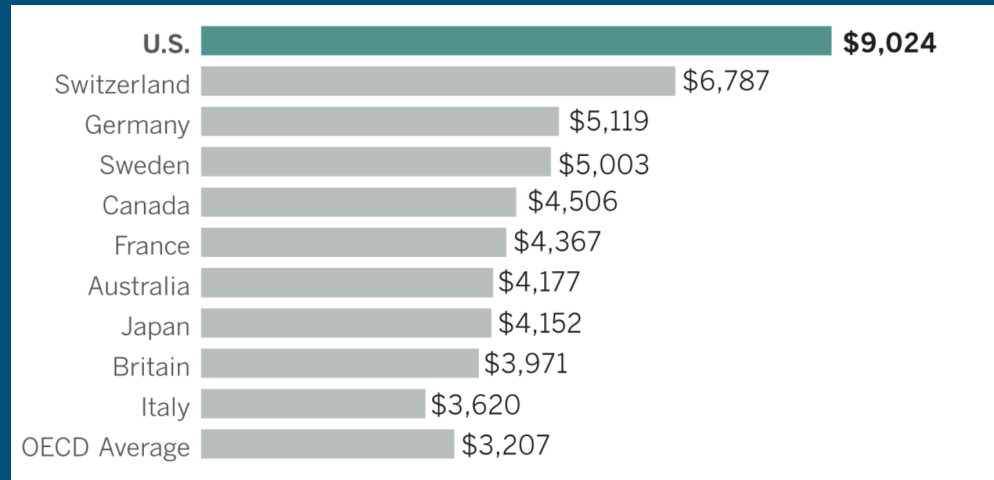


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Motivation

- Health insurance costs are high and unpredictable
- People want to keep same plans
- Identify plans that increase +15%

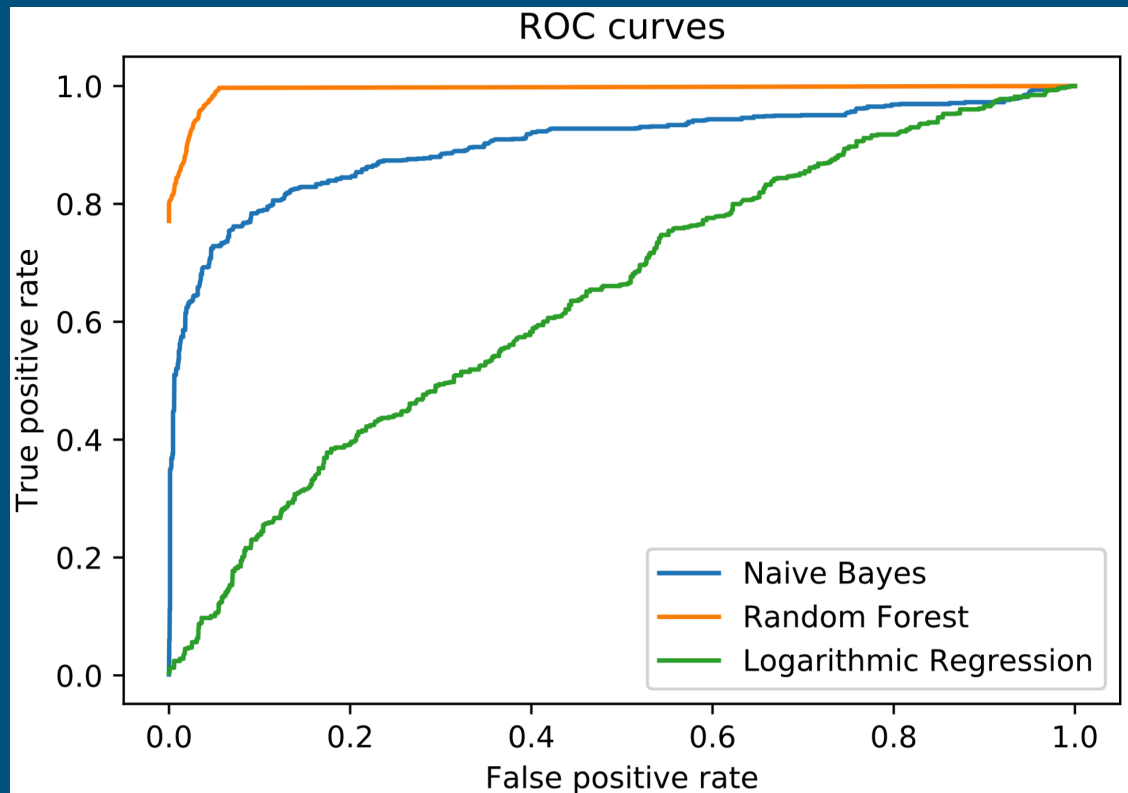


Data

- Three types of data:
- Insurance: Coverage, Previous Cost, New Plan
- Health Data: Healthy Days, Chronic Illness, Stress
- Demographics: Age, Uninsured Rate, Rural Population
- 2015 County-Level Data

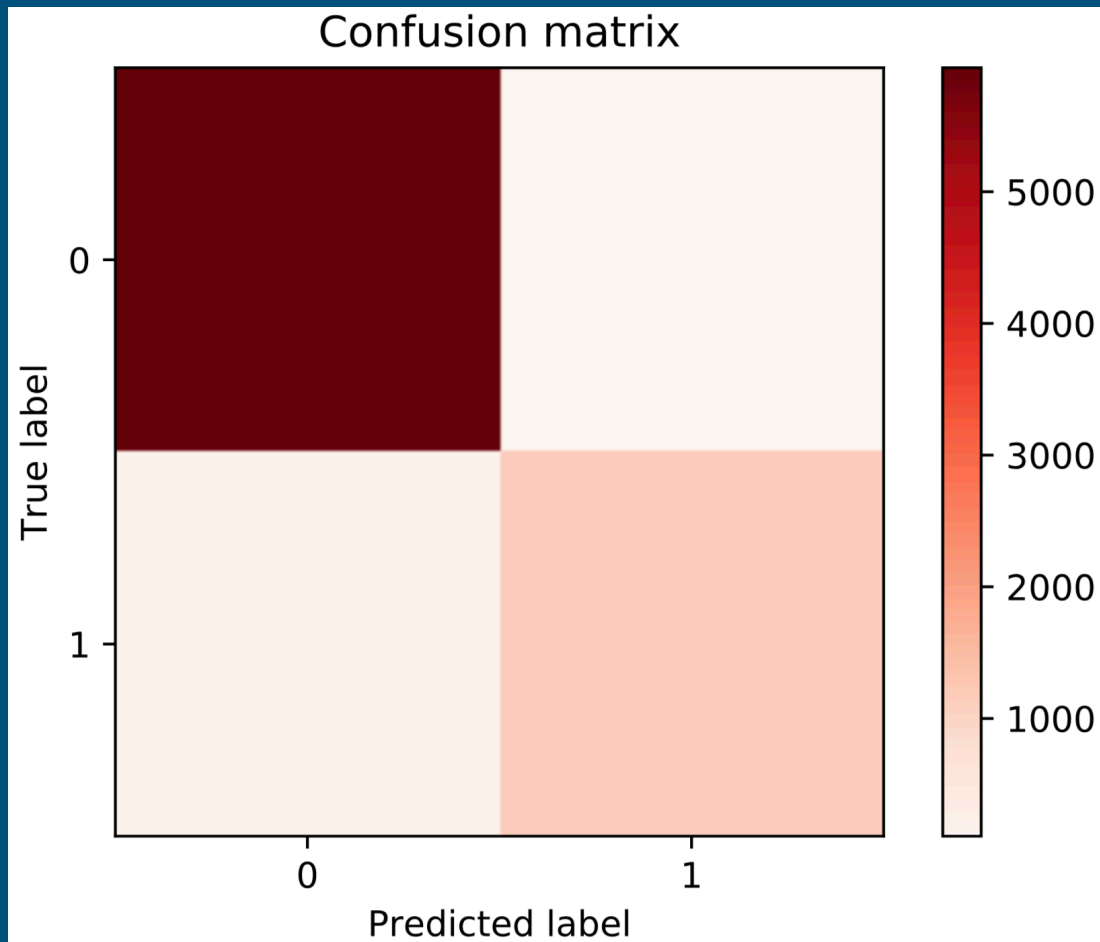
Model

- Random Forest Model
- Multiple Decision Trees
- Important Features:
 - + Coverage Level,
 - + Prior Rate Increase,
 - + Air Pollution



Results

- Precision: 92%
- Recall: 88%
- Accuracy: 96%



Next Steps

- Incorporate data from later years
- Incorporate additional geographies
- Study the role of non-ACA plans

Conclusions

- Large adjustments based on plan benefits
- Largely independent of outside factors
- Provides a healthy model for predicting increases

Thank you!

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