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More Emotional Better Predictable

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Outline

1. Motivation
2. Modeling
3. Results
4. Conclusion
Why Economist should get Emotional?

- Walmart is incorporating facial expression devices that can measure post-purchase customer satisfaction.
- Disney is experimenting with various biometric tools, including eye-tracking and facial expression analysis.
- Is it finally the time of Edgeworth’s “Hedonimeter”?

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What we find?

1. Surprise and sadness are effective in purchase decisions when neutral emotion is primed, but anger and disgust mostly explain purchase decisions after emotion is primed.

2. Anger (drowsiness) is important to predict non-purchase (purchase) decisions after emotion is primed.

3. Increased intensity of emotion helps to increase the prediction accuracy by 3% under low and 9% under high emotional feelings compared to the regular emotion condition.
Regression trees have been developed to bridge linear models with non-parametric estimations. While growing a tree, at each node \( \sqrt{p} \) number of input variables are randomly drawn with replacement. A point, along with the range of each randomly drawn variable, is chosen to do a split to minimize the Residual Sum of Squares (RSS) of the outcome variable.
Classification with a tree

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More Emotional Better Predictable
Distribution of Prediction Results

Predictions for all Possible Hold-Out Samples

- Control
- Easy Treatment
- Hard Treatment
Modern Hedonimeter can increase the prediction power of economic models and thus exhibits the importance of emotional feelings in economic choice.
The End!