

A+

~~(Average)~~

# Statistics

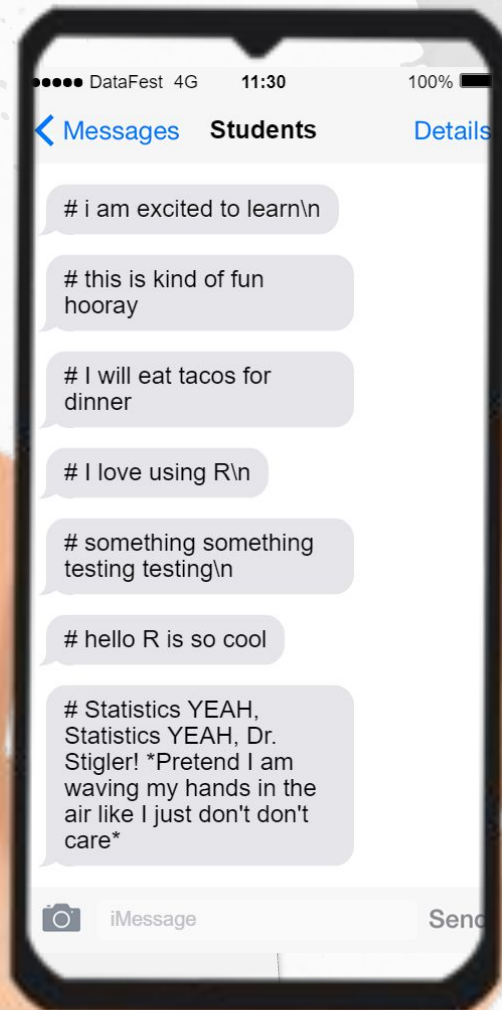


A presentation by Hannah Steinberg,  
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**R Session Aborted**

R encountered a fatal error.



## Modeling

Classification Model	Accuracy
XGBoost	0.73
Random Forest	0.72
KNN	0.65

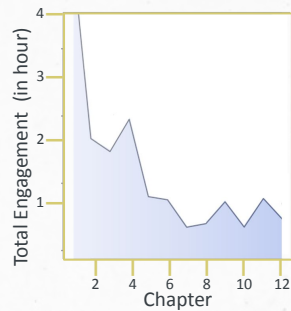
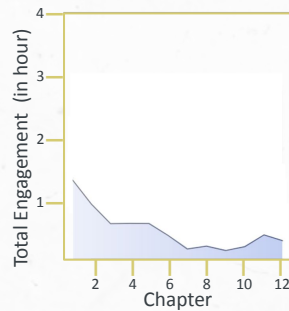
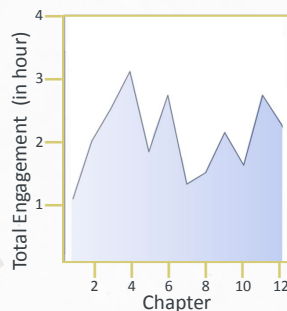
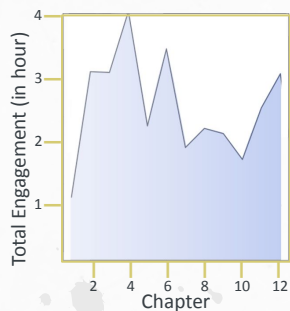
## Top Predictors:

- Total engagement time
- Cost
- Completion Rate
- Expectancy
- Other constructs...

## Points to Consider...

- Linear regression displayed **high correlation** between variables.
  - Engagement vs Constructs (VIF = 6~11)
- The **Accuracy** of the Models significantly **improved** (0.60 -> 0.70) after the 4 **construct scores** are added.

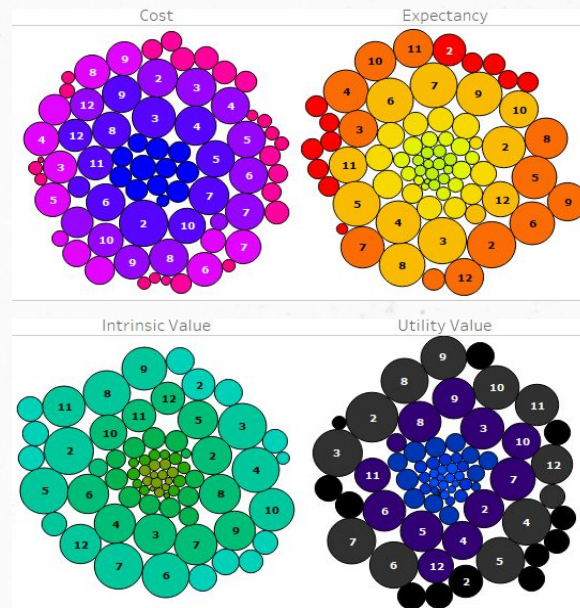
## Which students are the top 10%?



## Construct Overview

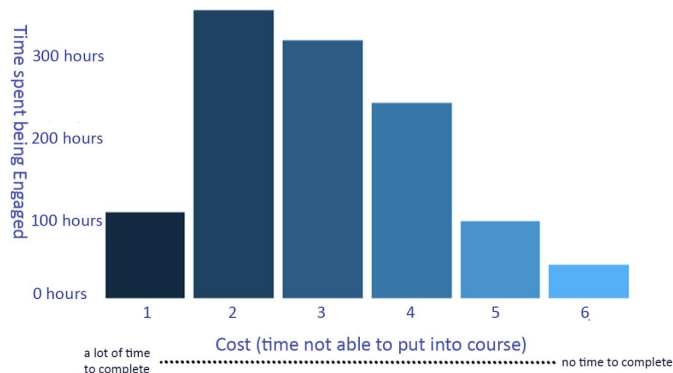
## Construct, Response

Cost, 1	Intrinsic Value, 1
Cost, 2	Intrinsic Value, 2
Cost, 3	Intrinsic Value, 3
Cost, 4	Intrinsic Value, 4
Cost, 5	Intrinsic Value, 5
Cost, 6	Intrinsic Value, 6
Expectancy, 1	Utility Value, 1
Expectancy, 2	Utility Value, 2
Expectancy, 3	Utility Value, 3
Expectancy, 4	Utility Value, 4
Expectancy, 5	Utility Value, 5
Expectancy, 6	Utility Value, 6

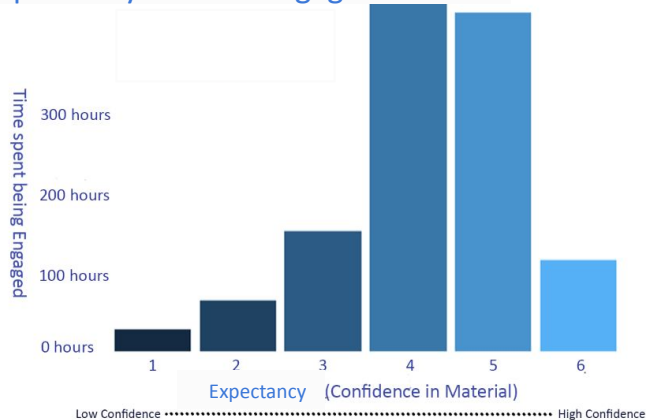


## Emotions and Engagement

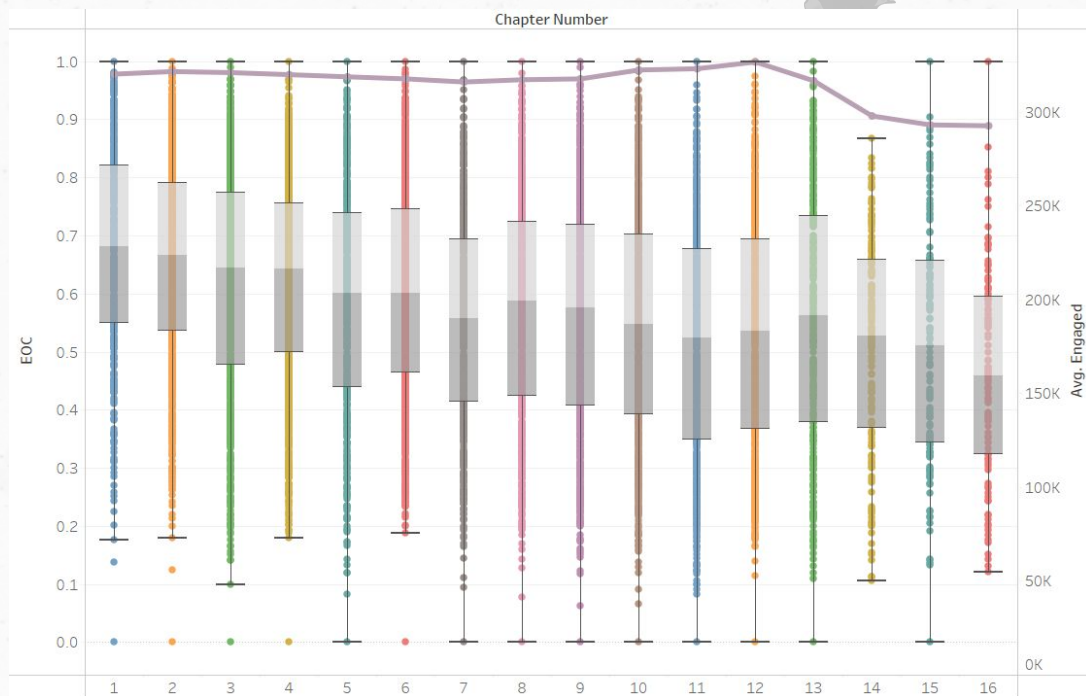
## Cost vs Total Engagement



## Expectancy vs Total Engagement



## Chapter Difficulty



## Conclusion:

- Students learn better when they are more **Engaged**
- A little pressure is good...

## Suggestions:

- Gamifying Data can enhance learning and boost confidence
- learning-progress component drives student.

External Data