

Midterm Topics

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Customer Analytics

1

Statistic Review

Need to understand:

- Understand what statistical methods are proper given the circumstances/questions
 - Continuous vs. Categorical variables
- The formulas of some basic statistics appeared in the lecture
 - E.g., standard error of sample mean, Chi-squared statistics
- Basic concepts of hypothesis testing
 - When to accept/reject H_0 ?
 - Relationship between p-value and confidence interval

2

RFM

Need to understand:

- The rationales and key difference between independent and sequential approaches
- Premises behind RFM:
 - Why do we need responders and non-responders show different levels of R, F, and M?
 - Why do we need R, F, M not to correlate perfectly?
- Targeting:
 - Given predicted response rates, how do we decide whom to target?

3

DAG

Need to understand:

- The basic structures of DAG
 - E.g., fork, collider
- Bias diagnosis:
 - What are the common biases that DAG may help identify? How to mitigate the biases?

4

Regressions

Need to understand:

- How to read/interpret the output table
 - E.g., coefficient level, average marginal effect, p-values
- The business meaning of key coefficients
 - E.g., what does the intercept and interaction term represent/measure?