



# ASA DATAFEST TEAM: DATA DAWGS

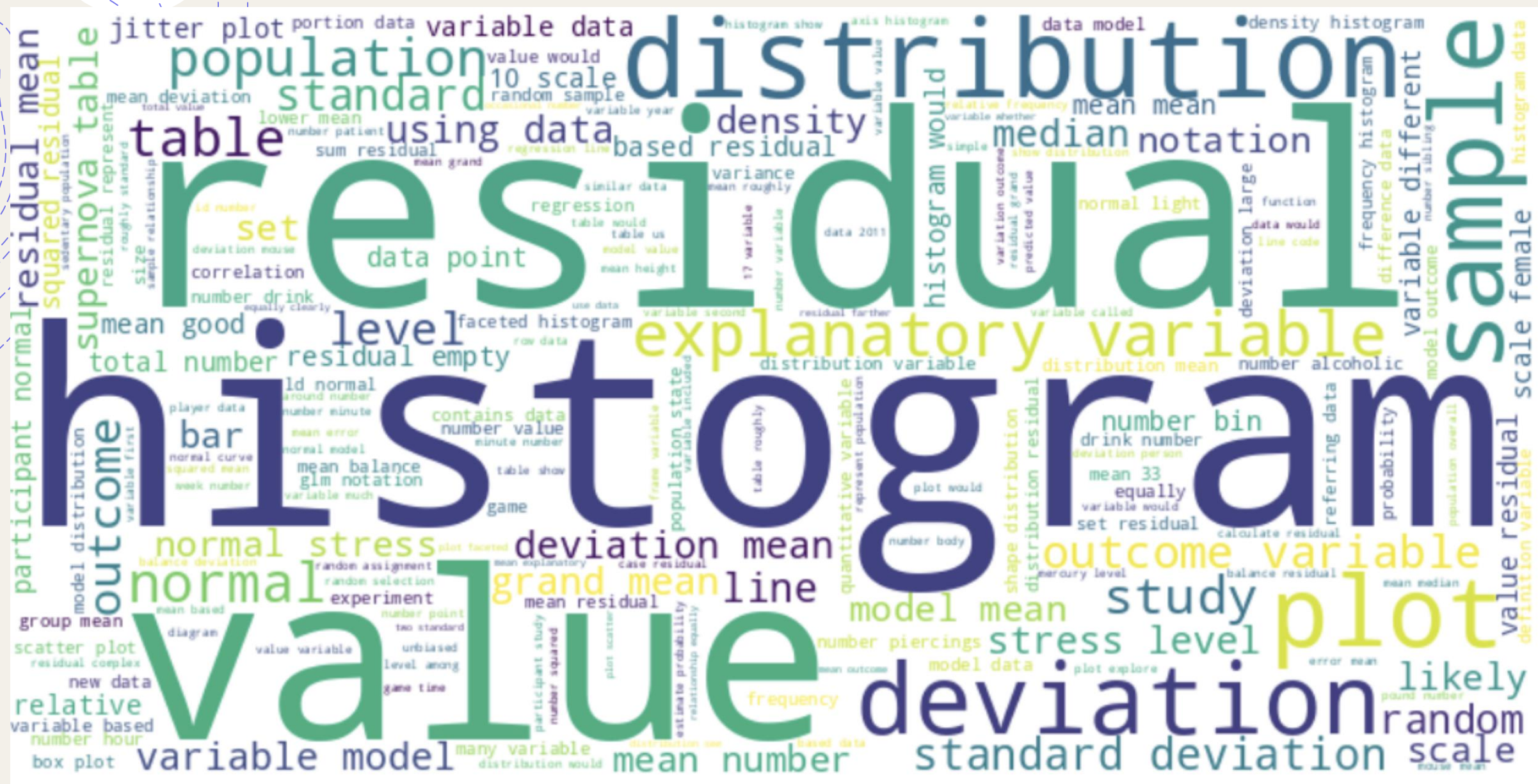
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# Motivation

- + How is student engagement related to performance?
- + We aim to pinpoint the main topics appearing in End-of-Course (EOC) questions that students often **fail**.
- + Create a **tailored list** of topics for each student to focus on for improvement.

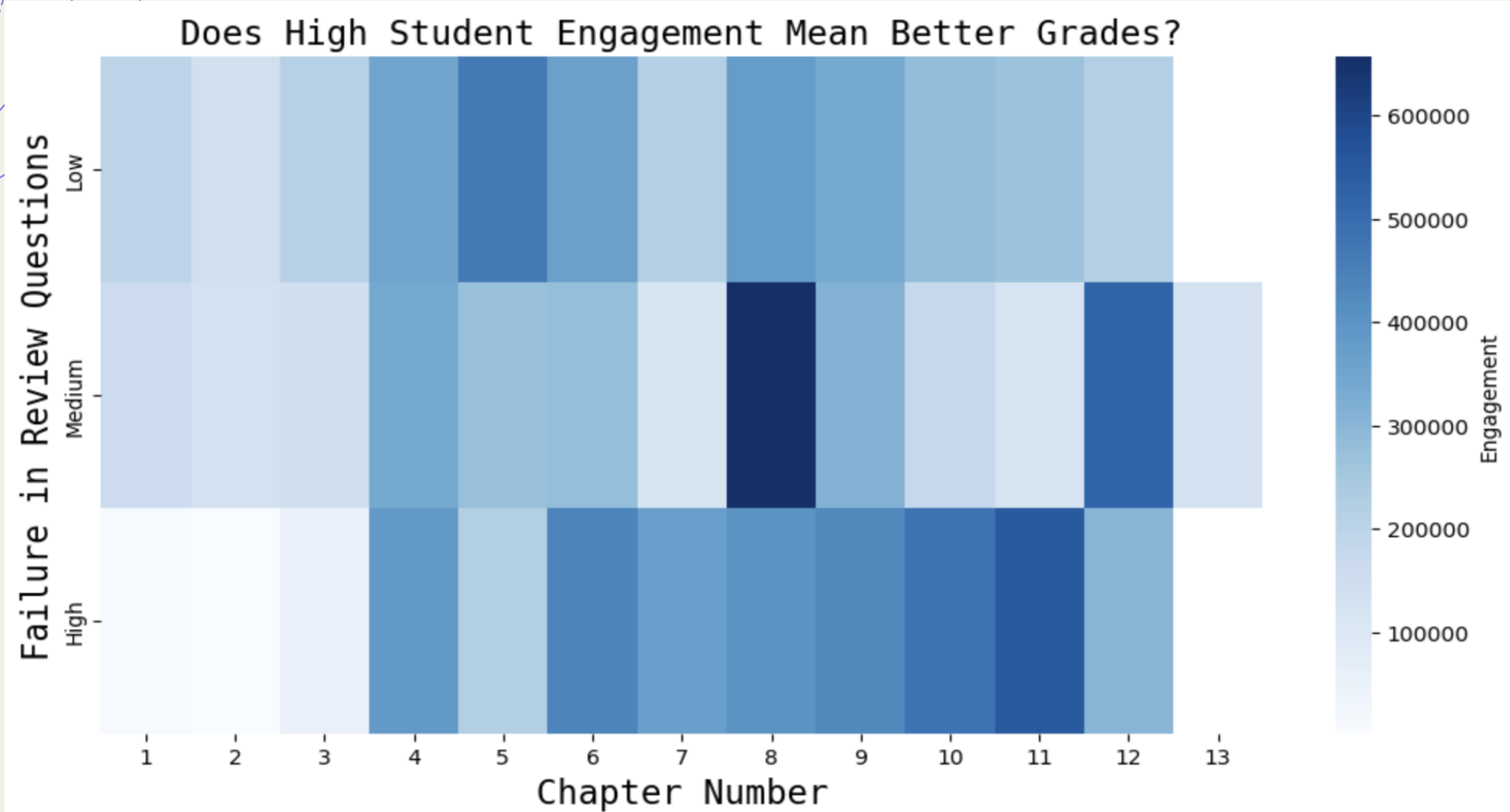
# Methods

- + Bag-of-words model using uni-grams and bi-grams
- + 'Clean' the data by shortening the questions to 1-grams/2-grams
- + Outputs list of words from questions that students struggled in

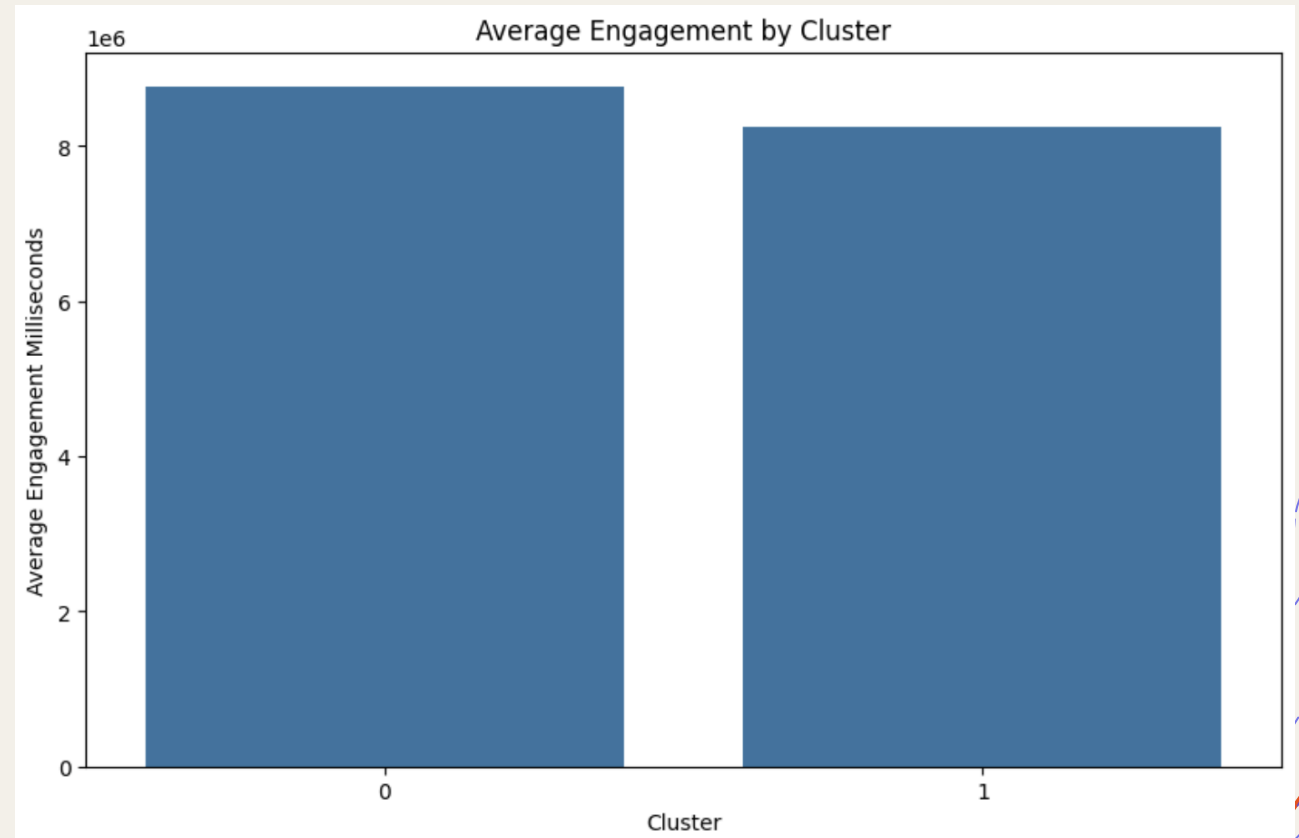
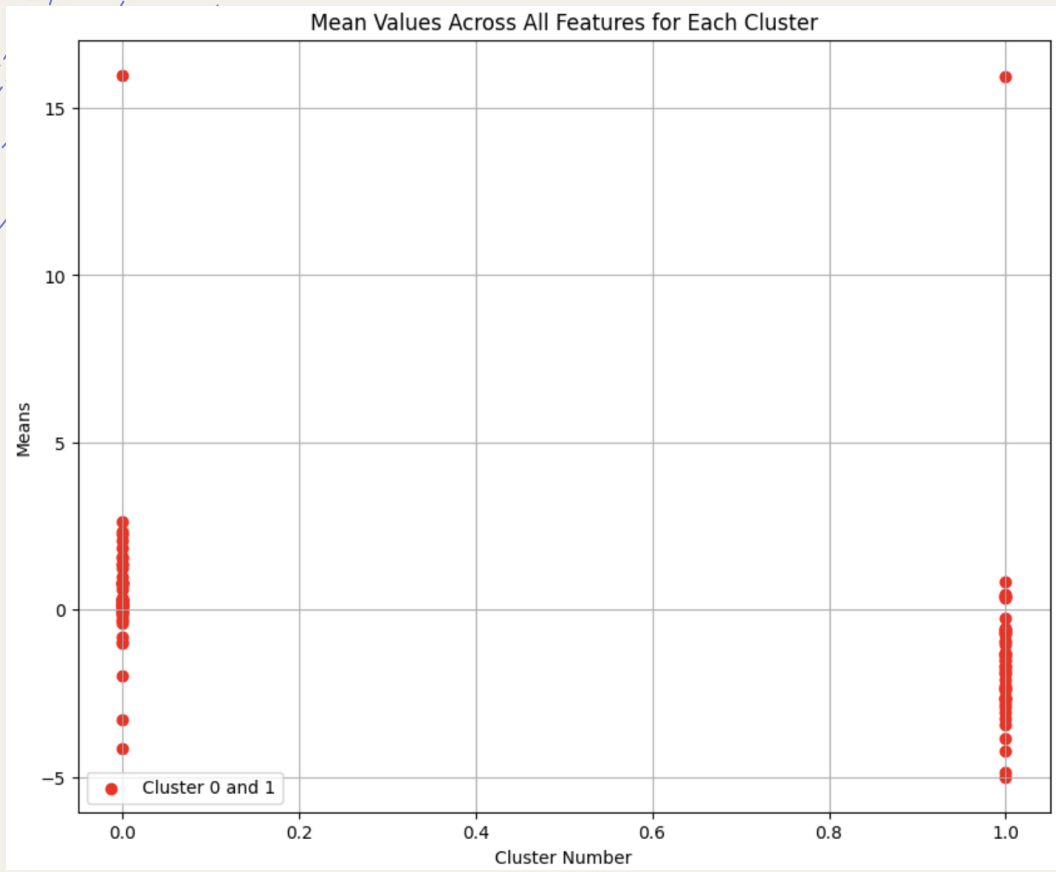




# Measuring Student Engagement



# K-means clustering



# Solutions

- + Tailor the practice questions and study material before review exam for each student
- + Using the bag of words model, generate a study guide for students to focus on these topics the most
- + Engagement levels remain consistent among students regardless of their understanding of the topic.