Team Members
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Project Topic and Relevance
Within Theme 2 (Intelligent Learning Platform), we have chosen the topic of extending the existing learning platform EducationalWeb. More specifically, we will improve the linking between slides on EducationalWeb. Currently, slides are linked by general topics covered in the slide. We aim to increase the functionality of EducationalWeb by allowing individual topics mentioned in bullet points on each slide to be connected to other slides that address and expand on those specific topics. Doing this solves an existing problem, because students using EducationalWeb to review CS 410 may gain clarity and deeper understanding of a difficult concept with access to related content that may not be immediately apparent by viewing only one bullet point in the current slide. Our proposed improvement to EducationalWeb would allow the student to easily find content related to this specific portion of the slide.

This project relates to the theme of an Intelligent Learning Platform because it will add intelligence to an existing learning platform, EducationalWeb. Finding related content to specific concepts on class slides is a text retrieval problem, which is what this class is all about.

Datasets, Algorithms, and Techniques
We will reference EducationalWeb itself strongly for this project, but other datasets may also prove useful. The Project Topics document provided for the project links to a ConceptView spreadsheet complete with course topics and which week they appear in. This will be useful to use in order to provide a starting point for our text retrieval of certain subjects. We may use ranking functions like BM25 to determine which slides are relevant to the particular point in question.

Validation and Coding Language
We will demonstrate that relevant slides are linked conveniently to the bullet points or concepts included in the currently viewed slide. We plan to use python to implement our code.

Workload Justification
Reviewing EducationalWeb structure and base code (3~5 hours)
Partitioning slides into portions by topic/content (10~12 hours)
Retrieving and ranking relevant slides for slide portions (12~15 hours)
Linking relevant slides to slide partitions (10~12 hours)
Creating topic index and grouping slides by shared topic (10~12 hours)
User testing/feedback and updating system accordingly (12~15 hours)

Total time = 57~71 hours