

**QUANTIFYING CONCEPTUAL DENSITY IN TEXT**

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**Aims** Conceptual Density describes the degree to which concepts in an extended text (such as the textbook for a university course) are interdependent, or to what degree they interact with each other. There is a hypothesis that text documents with high conceptual density are harder for students to process, because of the high interdependence between concepts. We aim to establish a method of quantifying this idea of conceptual density in text corpora.

**Objectives**

- Background reading on:
  - Conceptual Density
  - Cognitive Load
  - Hypertext Markers
  - Textual Signposting
  - Topic Segmentation
  - Other relevant topics
- Identify suitable text corpora
- Design and implement experiments to test published natural language processing methods on the above corpora
- If time allows, develop, implement, and test new methods for quantifying conceptual density.

**Timeline**

- Mar-Apr: Background reading
- Apr-May: Identifying text corpora
- Jun: Designing experiments & preliminary results (Interim report)
- Jul-Aug: Implementing experiments
- Sep-Oct: Developing, implementing, and testing new methods for quantifying conceptual density (Final report).

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