**CSCE 5290: Natural Language Processing - Project Proposal**

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**Title:** Semantic textual similarity

Problem Statement: Given two sentences, the task is to determine whether they mean the same and how similar the sentences are.

**Example:**

Sentence 1: They went shopping

Sentence 2: I went shopping

Relation Extraction:

Baseline: There are two similar words which overlapped in both sentences.

**Approach:**

1. Generating a baseline by calculating word overlap in both the sentences.
2. Finding the similarity based on number of nouns present in the sentences.
3. Finding the similarity based on number of verbs present in the sentences.
4. Finding the similarity based on number of nouns, verbs, adjectives present in the sentences.

**Expected Results:**

Given two sentences, s1 and s2, the system provides a similarity score as a floating-point number on the scale of 0 (no relation) to 5 (semantic equivalence).