Part-of-Speech Tagging with Hidden Markov Models

Introduction

This document explores Part-of-Speech (POS) tagging using Hidden Markov Models (HMMs). We will analyze a set of example sentences to derive POS tags, emission probabilities, and transition probabilities.

Example Sentences

- s1: Tom will chase Jerry
- s2: Jerry can trick Tom
- s3: Can Tom catch Jerry?
- s4: Jerry will hide Tom

POS Tags

- **Noun (N)**: Tom, Jerry
- **Modal Verb (M)**: will, can
- **Verb (V)**: chase, trick, catch, hide

Observations

- "Tom" and "Jerry" are identified as nouns (proper names).
- "will" and "can" are classified as modal verbs.
- "chase," "trick," "catch," and "hide" are categorized as verbs.

Q1. จงหา emission probabilities

Q2. จงหา transition probabilities

Q3. จาก dataset ข้างต้น ความน่าจะเป็นของ P(noun,model,noun |Tom,trick,Jerry)

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