XCS224U - Natural Language Understanding

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Course Completed by

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Overview

This project-oriented class focuses on developing systems and algorithms for robust machine understanding of human language. The course draws on theoretical concepts from linguistics, natural language processing, and machine learning. Learners explore building neural information retrieval systems using large language models and get a deeper understanding of classical and neural information retrieval methods. They explore semantic and syntactic relations between words with contextual word representation models such as transformers, BERT, ELECTRA, and GPT. Learners build their original baseline models that are entered into informal class-wide competitions and pursue an original project in natural language understanding with a focus on following best practices in the field.

Competencies / Skills

- Contextual Word Representations
- Information Retrieval
- In-Context Learning
- Evaluation Methods and Metrics
- Multi-domain Sentiment
- Few-shot OpenQA
- Compositional generalization
- Large Language Models (GPT)

Credential / Credit Earned

Certificate of Achievement in Natural Language Understanding verified by the Stanford Center for Professional Development.

Grade: Satisfactory **CEU(s): 10.0**

Grades and Units Information
Digital Credential Information

Associated Program

Artificial Intelligence Professional Program