COURSE DETAIL

LANGUAGE TECHNOLOGY
Country Sweden
Host Institution Lund University
Program(s) Lund University
UCEAP Course Level Upper Division
UCEAP Subject Area(s) Computer Science
UCEAP Course Number 130
UCEAP Course Suffix
UCEAP Official Title LANGUAGE TECHNOLOGY
UCEAP Transcript Title LANGUAGE TECHNOLOGY
UCEAP Quarter Units 6.00
UCEAP Semester Units 4.00

Course Description

The course introduces theories and techniques of natural language processing and language technology. It covers the whole field, from speech recognition and synthesis to semantics and dialogue. The course focuses on industrial and laboratory applications, such as document retrieval on the Internet, information extraction, conversational agents, and verbal interaction in virtual worlds. Fundamental algorithms are described using Prolog or regular expressions. Topics covered in this course include an overview of language processing (applications, disciplines of linguistics, examples); Corpus and word processing (regular expressions, automata, an introduction to Perl, concordances, tokenization, counting words, collocations); morphology, transducers, and part-of-speech tagging; Prolog to write phrase-structure grammars (constituents, trees, using Prolog to do natural language analysis, DCG rules, variables, getting the syntactic structure, compositional analysis to get the semantic structure); syntactic formalisms (constituency and dependency, chart parsing, statistical parsing, functions, dependency parsing); semantics (formal semantics, lambda-calculus, compositionality such as nouns, verbs, determiners, words and meaning, lexical semantics, case grammars, semantic grammars); discourse and dialogue (rhetoric, anaphora, structure, RST, automata, pairs, speech acts, multimodality); and an overview of speech synthesis and speech recognition.

Language(s) of Instruction
English

Host Institution Course Number
EDAN20

Host Institution Course Title
LANGUAGE TECHNOLOGY

Host Institution Course Details
http://cs.lth.se/edan20/

Host Institution Campus

Host Institution Faculty
Engineering

Host Institution Degree

Host Institution Department
Engineering- Computer Science

Course Last Reviewed
2022-2023

Print