LING438/538 Computational Linguistics

1 Description of Course

Introductory level for computation linguistics. Unless otherwise specified the course lectures and meeting times are Monday, Wednesday 4:30-5:45.

2 Required text


3 Prerequisites

1. For LING438: LING388
2. For LING538: No formal prerequisites.

4 Grading

1. For LING438: 100% Homework (+ optional final project)
2. For LING538: 75% Homework + 25% final project

While you may discuss homework questions with other students, you should write it up yourself in your own words. Cite your references. See Student Code of Academic Integrity: http://deanofstudents.arizona.edu/policies-and-codes/code-academic-integrity

5 Contents

In this semester, we will cover some of chapters in following parts:

Part I Words

Part III Syntax

Part IV Semantics and pragmatics

1 See https://www.cs.colorado.edu/~martin/slp.html or https://web.stanford.edu/~jurafsky/slp3 Note that the latter site is for the draft of the 3rd edition.

2 You can work in groups of up to two people for the final project.
Part V Applications

Part I Words contains regular expression, transducers, and POS tagging. Part III Syntax includes formal grammars, syntactic parsing, and unification with features. For Part IV Semantics and pragmatics and Part V Applications, we will study lexical semantics (Chapter 19-20), IE (Chapter 22), and MT (Chapter 25).

1. Chapter 16. Language and complexity
2. Chapter 2. Regular expression and automata
3. Chapter 3. Words and transducers
4. Chapter 4. N-grams
5. Chapter 5. POS tagging
6. Chapter 6*. HMM and ME
7. Chapter 12. Formal grammars
8. Chapter 13. Syntactic parsing
9. Chapter 14*. Statistical parsing
10. Chapter 15. Features and unification
11. Chapter 19. Lexical semantics
12. Chapter 20. Computational lexical semantics
13. Chapter 22*. Information extraction

6 Schedule (TBA)

<table>
<thead>
<tr>
<th>event type</th>
<th>date</th>
<th>description</th>
<th>course materials</th>
</tr>
</thead>
</table>

\(^3\)Chapters in * can be optional.