

# Computational Linguistics

## Lecture 1. Introduction



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# Sources

- Slides from:
  - Felipe Bravo-Marquez: <https://github.com/dccuchile/CC6205/>

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## Lecture 2. Text pre-processing



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# Sources

- Literature:

- Jurafsky & Martin chapter 2.2, 2.3, 2.4. <https://web.stanford.edu/~jurafsky/slp3/>

- Slides from:

- Jurafsky & Martin: <https://web.stanford.edu/~jurafsky/slp3/>
- Suzan Verberbe: <http://tmr.liacs.nl/TM.html>

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## Lecture 3. Regular expressions and edit distance



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# Sources

- Literature:
  - Jurafsky & Martin chapter 2.1, 2.5: <https://web.stanford.edu/~jurafsky/slp3/>
- Slides from:
  - Jurafsky & Martin: <https://web.stanford.edu/~jurafsky/slp3/>

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## Lecture 4a. POS tagging



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# Sources

- Literature:

- Jurafsky & Martin chapter 8: <https://web.stanford.edu/~jurafsky/slp3/>

- Slides from:

- Nathan Schneider (based on Sharon Goldwater and Philipp Koehn): <http://www.cs-114.org/course-schedule/>



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Lecture 4b. Sequence labelling and recurrent neural networks



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# Sources

- Literature:
  - Jurafsky & Martin chapter 9: <https://web.stanford.edu/~jurafsky/slp3/>
- Slides from:
  - Christopher Manning: <http://web.stanford.edu/class/cs224n/>

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## Lecture 5. Sequence-to-sequence transformation



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# Sources

- Slides from:
  - Felipe Bravom: <https://github.com/dccuchile/CC6205/>

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## Lecture 6. Vector space model and classification



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# Sources

- Slides from:
  - Suzan Verberbe: <http://tmr.liacs.nl/TM.html>

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## Lecture 7. Word embeddings



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# Sources

- Literature:
  - Jurafsky & Martin chapter 6: <https://web.stanford.edu/~jurafsky/slp3/>
- Slides from:
  - Jurafsky & Martin: <https://web.stanford.edu/~jurafsky/slp3/>



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## Lecture 8. Constituent grammar and parsing



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# Sources

- Literature:
  - Jurafsky & Martin chapter 12, 13: <https://web.stanford.edu/~jurafsky/slp3/>
- Slides from:
  - Diyi Yang: [https://www.cc.gatech.edu/classes/AY2020/cs7650\\_spring/](https://www.cc.gatech.edu/classes/AY2020/cs7650_spring/)

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## Lecture 9. Dependency parsing



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# Sources

- Literature:
  - Jurafsky & Martin chapter 15: <https://web.stanford.edu/~jurafsky/slp3/>
- Slides from:
  - Diyi Yang: [https://www.cc.gatech.edu/classes/AY2020/cs7650\\_spring/](https://www.cc.gatech.edu/classes/AY2020/cs7650_spring/)

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## Lecture 10. Word sense disambiguation



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# Sources

- Literature:
  - Jurafsky & Martin chapter 19: <https://web.stanford.edu/~jurafsky/slp3/>
- Slides from:
  - Jurafsky & Martin: <https://web.stanford.edu/~jurafsky/slp3/>

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## Lecture 11. Semantic role labelling



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# Sources

- Literature:
  - Jurafsky & Martin chapter 20: <https://web.stanford.edu/~jurafsky/slp3/>
- Slides from:
  - Jurafsky & Martin: <https://web.stanford.edu/~jurafsky/slp3/>



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## Lecture 12. Naïve Bayes



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# Sources

- Literature:

- Jurafsky & Martin chapter 4: <https://web.stanford.edu/~jurafsky/slp3/>

- Slides from:

- Suzan Verberbe: <http://tmr.liacs.nl/TM.html>

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## Lecture 13. Feedforward neural networks



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# Sources

- Literature:
  - Jurafsky & Martin chapter 7: <https://web.stanford.edu/~jurafsky/slp3/>
- Slides from:
  - Suzan Verberbe: <http://tmr.liacs.nl/TM.html>

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## Lecture 14. Contextual word embeddings



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# Sources

- Slides from:
  - Felipe Bravo-Marquez: <https://github.com/dccuchile/CC6205/>

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## Lecture 15. Information extraction



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# Sources

- Literature:
  - Jurafsky & Martin chapter 18: <https://web.stanford.edu/~jurafsky/slp3/>
- Slides from:
  - Suzan Verberbe: <http://tmr.liacs.nl/TM.html>



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## Lecture 16. Sentiment analysis



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# Sources

- Slides from:
  - Suzan Verberbe: <http://tmr.liacs.nl/TM.html>

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## Lecture 17. Dialogue systems



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# Sources

- Literature:
  - Jurafsky & Martin chapter 26: <https://web.stanford.edu/~jurafsky/slp3/>
- Slides from:
  - Jurafsky & Martin: <https://web.stanford.edu/~jurafsky/slp3/>

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## Lecture 18. Machine translation



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# Sources

- Literature:
  - Eisenstein chapter 18: <https://github.com/jacobeisenstein/gt-nlp-class/tree/master/notes>
- Slides from:
  - Diyi Yang: [https://www.cc.gatech.edu/classes/AY2020/cs7650\\_spring/](https://www.cc.gatech.edu/classes/AY2020/cs7650_spring/)