WS 05/06 B.A. in ISCL

Frank Richter: Introduction to Computational Linguistics

Seminar: Wednesday 16ct-18 at the SfS, Hörsaal 0.02

Regular seminar starts: Wednesday, 26th October 2005

Credits: 3 CP

Office Hours: Monday 11.00 - 12.00

Office No. at SfS Phone # Email

2.17 29-78489 fr@sfs.uni-tuebingen.de

• Webpage: www.sfs.uni-tuebingen.de/~fr/teaching/ws05-06/icl/

• Midterm exam: December 14th

• Final exam: in the last week of classes, on February 15th

Class Participation

Examination regulations of the Neuphilologische Fakultät require that students attend courses regularly. If students do not attend a course meeting on more than two occasions in one semester without proper excuse (e.g. doctor's note), the course instructor has to give them a failing grade.

Please do not put me in a position to have to fail you for this reason. If you cannot come to class, please email me ahead of time, if at all possible.

You are expected to come on time. Being late without good reasons will count as not having attended a course meeting.

If you own a mobile phone and carry it with you, please turn it off before class.

Reading Assignments

Please read the assigned reading in advance of the class meeting for which it was assigned. I will presuppose that you have read the material when we discuss it in class.

Grading Policy

Your grade will be based on two components: midterm exam (50 %) and final exam (50 %).

Course Objective This introductory course has five major goals:

- (Largely non-technical) introduction to the field of computational linguistics and its history.
- Survey of natural language processing applications.
- In-depth look at machine translation as a means to illustrate the major tasks for natural language processing
- Presentation of tools and resources needed for natural language processing applications.
- To give you credit for your work and to get you one step closer to your degree.

Time Table

- 26.10.: Organizational matters, General Introduction
- 02.11.: Introduction: Overview and History of Computational Linguistics
- 04.11.: Excursion Weekend: Survey of NLP Applications / Machine Translation
- 09.11.: Machine Translation I
- 16.11.: Machine Translation II
- 23.11.: Incremental Processing and Tokenization I
- 30.11.: Incremental Processing and Tokenization II
- 07.12.: Guest lecture: Adam Przepiórkowski (Polish Academy of Sciences, Warsaw):
 Argument structure extraction from corpora
- 14.12.: Midterm exam
- 21.12.: Regular Expressions, Finite State Automata
- 11.01: Finite State Transducers
- 18.01: Finite State Transducers and Replacement Operators
- 25.01: Morphological Analysis
- 01.02: Part of Speech Tagging
- 08.02: Review Meeting
- 15.02: Final exam

References

[Arnold et al., 1994] Arnold, D., Balkan, R., Humphreys, R. L., Meijer, S., and Sadler, L. (eds) 1994. Machine Translation. An Introductory Guide. Manchester/Oxford: NCC Balckwell Ltd.

[Dale et al., 2000] Dale, R., Moisl, H., and Somers, H. (eds) 2000. *Handbook of Natural Language Processing*. New York, Basel: Marcel Dekker, Inc.

- [Garside et al., 1997] Garside, R., Leech, G., and A., McEnery (eds) 1997. Corpus Annotation. Linguistic Information from Computer Text Corpora. Addison Wesley Longman Ltd.
- [Hutchins and Somers, 1992] Hutchins, W. J. and Somers, H. L. (eds) 1992. An Introduction to Machine Translation. San Diego: Academic Press.
- [Karttunen, 2003] Karttunen, L. 2003. Finite state technology. In Mitkov [Mitkov, 2003], 339–358.
- [Leech, 1997] Leech, G. 1997. Grammatical tagging. In Garside et al. [Garside et al., 1997], 19–33.
- [Locke and Booth, 1955] Locke, W. N. and Booth, A. D. (eds) 1955. *Machine Translation of Languages*. Cambridge, Mass.: MIT Press.
- [Mitkov, 2003] Mitkov, R. (ed) 2003. The Oxford Handbook of Computational Linguistics. Oxford University Press.
- [Palmer, 2000] Palmer, D. D. 2000. Tokenization and sentence segmentation. In Dale et al. [Dale et al., 2000], 11–36.
- [Searle, 1980] Searle, J. 1980. Minds, brains, and programs. *Behavioral and Brain Sciences*, 3:417–458.
- [Slocum, 1988] Slocum, J. (ed) 1988. *Machine Translation Systems*. Cambridge University Press.
- [Somers, 2000] Somers, H. 2000. Machine translation. In Dale et al. [Dale et al., 2000], 329–346.
- [Trost, 2003] Trost, H. 2003. Morphology. In Mitkov [Mitkov, 2003], 25-47.
- [Turing, 1950] Turing, A. M. 1950. Computing machinery and intelligence. *Mind*, 59.