



Course Weekly Outline

Course Instructor	Dr. Ahmed Hussein Aliwy				
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Title	Natural Language Processing				
Course Coordinator					
Course Objective	An introduction to techniques of natural language processing and the computer system used for analyzing NLP (Text and Speech)				
Course Description					
Textbook	1- D. Jurafsky and J. Martin (2009) "SPEECH and LANGUAGE PROCESSING-An Introduction to Natural Language Processing, Computational Linguistics, and Speech Recognition. 2- S. Bird, E. Klein, and E. Loper (2009) "Natural Language Processing with Python"				
References	Internet				
Course Assessment	Term Tests	Laboratory	Quizzes	Project	Final Exam
	25	20	5	0	50
General Notes					



Course weekly Outline

week	Date	Topics Covered	Lab. Experiment Assignments	Notes
1	29-9-2013	Introduction to NLP: Definition of NLP, stages of NLP, what make NLP hard?	Introduction to python	
2	7-10-2013	Introduction to NLP: Levels of ambiguities and understanding	Python program control	
3	14-10-2013	NLP Applications examples Types of languages and grammars (PSG, CSG, CFG and RG)	Python function	
4	21-10-2013	Regular expression, morphological analysis and lexical analysis	String processing	
5	28-10-2013	N-grams	Python Advance topic	
6	4-11-2013	N-grams	Python Advance topic	
7	11-11-2013	Tutorials	RE	
8	18-11-2013	POS and Tagging Brill and HMM(briefly)	RE	
9	25-11-2013	Syntax analysis: CFG, parsing: top down and bottom up parsers	N-grams	
10	2-12-2013	Dynamic programming parsers: CYK	N-grams	
11	9-12-2013	Rules Of English Grammar & Example of PYTHON program of English Grammar	POS tagging	
12	16-12-2013	Tutorials	CFG	
13	23-12-2013	Semantic analysis: introduction Analyzing the semantic structure of a sentence	English Grammar	
14	30-12-2013	Semantic analysis: Semantic representation	CYK parser	
15	6-1-2014	Semantic analysis: lexical semantic (Example WordNet)	Semantic representation	
16	13-1-2014	Exam	Introduction to python	
Half-year Break				
17	10-2-2014	MT: introduction, computer aided human translation CAHT, pre statistical architecture (direct translation, transfer approaches	Advance topic in python	

		and interlingua approaches)		
18	17-2-2014	MT: introduction, computer aided human translation CAHT, pre statistical architecture (direct translation, transfer approaches and interlingua approaches)	WordNet	
19	24-2-2014	MT: Translation Dictionary: (Types of dictionary and Dictionary structure)	Simple example on MT	
20	3-3-2014	Introduction to Speech processing (speech definition-problem areas)	Dealing with dictionaries	
21	10-3-2014	Speech Processing: Advance Topic	Dealing with dictionaries	
22	17-3-2014	Speech Recognition: introduction, architecture problems	Introduction to Speech processing	
23	24-3-2014	SR: Automatic speech recognition	Introduction to Speech processing	
24	31-3-2014	SR: Automatic speech recognition	SR	
25	7-4-2014	SR: HMM	SR	
26	14-4-2014	Applications on SR	SR	
27	21-4-2014	Tutorials	SR	
28	28-4-2014	Speech synthesis(Text to speech)	Speech synthesis(Text to speech)	
29	5-5-2014	The relationship between NL & SR, Compares between Written text processing & Speech processing	Speech synthesis(Text to speech)	
30	12-5-2014	Natural Language Generation: Example and Program	Natural Language Generation	
31	19-5-2014	Exam	Exam	
32	26-5-2014			

Instructor Signature:

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