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IBM Watson Seminar

Seminar Automatic Question Answering Using IBM Watson

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Dates & Rooms:

Wednesday, 8:30 - 10:00; Room: 01.134

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Introduction

[Link](#) (Jeopardy)

AI-Powered Natural Language Processing

The Evolution from Machine Learning to Machine Intelligence

- While the focus of machine learning (ML) is natural language understanding (NLU), machine intelligence (MI) is geared up for natural language generation (NLG) that involves text planning, sentence planning, and text realization.
- Shift in gears from machine learning to machine intelligence is achieved through automated real-time question-answering, emotional analysis, spam prevention, machine translation, summarization and information extraction.



Natural Language Understanding Services for Conversational Question Answering Systems

1. Watson Assistant (IBM): <https://www.ibm.com/watson>
2. LUIS (Microsoft): <https://www.luis.ai>
3. API.ai (Dialogflow, Sunnyvale, CA): <https://www.api.ai>
4. Wit.ai (Wit.ai Inc. Palo Alto, CA): <https://www.wit.ai>
5. Amazon Lex: <https://aws.amazon.com/lex>
6. RASA (Popular Open Source): <https://www.rasa.ai>

All these services share the same basic concepts:

1. Train a classifier based on example data to extract **intents** and **entities**, each consisting of a single or multiple characters
2. Provide export and import functions (JSON-format) for training data and results (**batch mode**)
3. Trigger actions when detecting specific combinations of intents and entities in unstructured input text.

Note: IBM Watson supports a [Dialog service](#) as well as a self-learning mode: [Discovery service](#)

Service	Intents	Entities	Batch import
LUIS	+	+	+
Watson	+	+	+
APL.ai	+	+	+
wit.ai	+	+	0
Lex	+	0	-
RASA	+	+	+

IBM Watson Demos

- Watson Assistant:
<https://www.ibm.com/watson/ai-assistant/>
- Watson Discovery:
<https://www.ibm.com/cloud/watson-discovery>
- Dialog Demo:
<http://dialog-demo.mybluemix.net/>
- More Services:
<https://console.bluemix.net/catalog/?category=watson>
<https://www.ibm.com/smarterplanet/us/en/ibmwatson/developercloud/services-catalog.html>

Free online course: Build Your Own Chatbot

<https://cognitiveclass.ai/courses/how-to-build-a-chatbot/>

Chatbots are one of the most exciting and in-demand topics in tech. Gartner predicts that by 2020, 85% of businesses will have their own chatbot. If you want to learn this rapidly emerging technology, put a chatbot on your own website or build chatbots for friends, this free chatbot course is for you.

This course provides a practical introduction on how to build a chatbot with **Watson Assistant** (formerly Watson Conversation). Within it, you'll learn how to plan, build, test, analyze and deploy your first chatbot.

Leveraging the AI power of Watson Assistant, you will be able to design your own chatbot without the need to write any code. You'll also learn how to quickly deploy your chatbot on WordPress-based sites.



Develop new Ideas – Invert the course!

- Experiment with Watson Services
- Experiment with new teaching ideas: Invert the course!
 - ✓ We provide access to teaching materials
 - ✓ You will form small groups and present new discoveries to the other students
 - ✓ So we will get acquainted with Watson gradually together
- Develop new ideas and implement them together

Schedule

- Get in touch with IBM Watson services (until May. 23rd)
 - Enroll into and complete available online courses
 - IBM Developer Cloud
 - IBM Bluemix
- Brainstorm a possible „project“ with the Watson services (until mid of June)
- Implement a solution in a small group
- Present solution (end of the semester)



Possible Applications

- Example of commercial applications using cognitive services:

[IBM Watson Assistant for Hospitality](#)

[Introducing IBM Watson Assistant for Automotive](#)

[IBM Watson: A Doctor's Digital Assistant](#)

<https://www.technologyreview.com/s/600990/siri-for-business/>

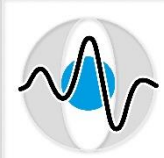
<https://cognitoys.com/>

[An Introduction to Amazon's Voice Service](#)

<https://www.ibm.com/blogs/watson/2016/03/watson-connie/>

Resources

- IBM Developer Cloud
<https://www.ibm.com/smarterplanet/us/en/ibmwatson/developercloud/services-catalog.html>
- IBM Bluemix
<http://www.ibm.com/cloud-computing/bluemix/>
- IBM X-Prize
<http://www.xprize.org/ai>
- Watson Course
[Course Link](#)



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Questions?



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Get Started!