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Course Code: W7L162G

Course Title: Creating Voice Interfaces with Watson Speech to Text and Text to Speech

### **Description:**

An emerging trend in AI is the availability of technologies that add speech capabilities by enabling fast and accurate speech transcription in multiple languages for various use cases, including but not limited to customer self-service, agent assistance and speech analytics. This course takes the learners through applying IBM Watson Speech to Text and Text to Speech technology for their unique use case. The course starts by explaining at a high level some common business use cases for Watson Speech Services and the underlying science behind the technology of Watson Speech to Text and Text to Speech as developed by IBM, leverage the API methods for calling Speech services, customize, and deploy speech prototypes to suit your unique domain language and finally the course will end by integrating voice capabilities to an existing agent Watson Assistant using Watson Speech to Text and Text to Speech.

### **Objectives:**

After completing this course, you should be able to:

- Describe the purpose, value, and some potential benefits of Speech Recognition
- Interpret the various components of IBM Watson Speech Services
- Identify some common business use cases for Watson Speech Services
- Explain at a high level the capabilities of Watson Speech Services
- Describe the key capabilities of IBM Watson Speech to Text including customization capabilities
- Create an instance of Watson of IBM Watson Speech to Text
- Leverage the Watson Speech to Text API service to create a prototype that converts speech to text
- Improve the transcription of the prototype by using a trained customized language model
- Leverage Watson Language Translator to get transcriptions in multiple languages
- Describe the key capabilities of Text to Speech including customization capabilities
- Create an instance of Watson Text to Speech
- Leverage the Watson Text to Speech API service to create a prototype that converts speech to text
- Improve the transcription of the prototype by using a trained customized model
- Integrate a deployed Watson Assistant (chatbot) with IBM Watson Speech Services to enable voice conversations

### **Prerequisites:**

Before taking this course, you should have:

- Basic Python
- Basic knowledge of RESTful API
- General use of IBM Cloud and an IBM Cloud account
- Login to Cloud Pak for Data account

The following services within the IBM Cloud are extensively used for this course. Prior setup is recommended. This setup is not mandatory, as a detailed walk-through of creating instances and accessing the following services are covered in the course.

- IBM Watson Speech to Text – Plus Plan
- IBM Watson Text to Speech – Plus Plan
- IBM Watson Language Translator – Light Plan
- IBM Watson Studio
- IBM Watson Assistant – Light Plan

**Duration:**

7.2 Hrs

**Topics:**

- Introducing Speech Recognition and Watson Speech Services
- In-depth analysis of Watson Speech to Text
- In-depth analysis of Watson Text to Speech
- Adding a voice interface to your chatbot

**Audience:**

- Anyone looking to automate transcribing speech to text or text to speech by using IBM Watson Speech to Text and Text to Speech Technology
- Practicing AI specialists looking to add speech capabilities to their existing AI-powered services like chatbots
- Practicing Data Scientists looking to get insights from speech and text analysis
- Business leaders looking to interpret the capabilities of IBM Watson Speech to Text and Text to Speech
- Anyone looking to know the process of integrating speech to text or text to speech with a chatbot like Watson Assistant and apply this technology to solve related domain problems