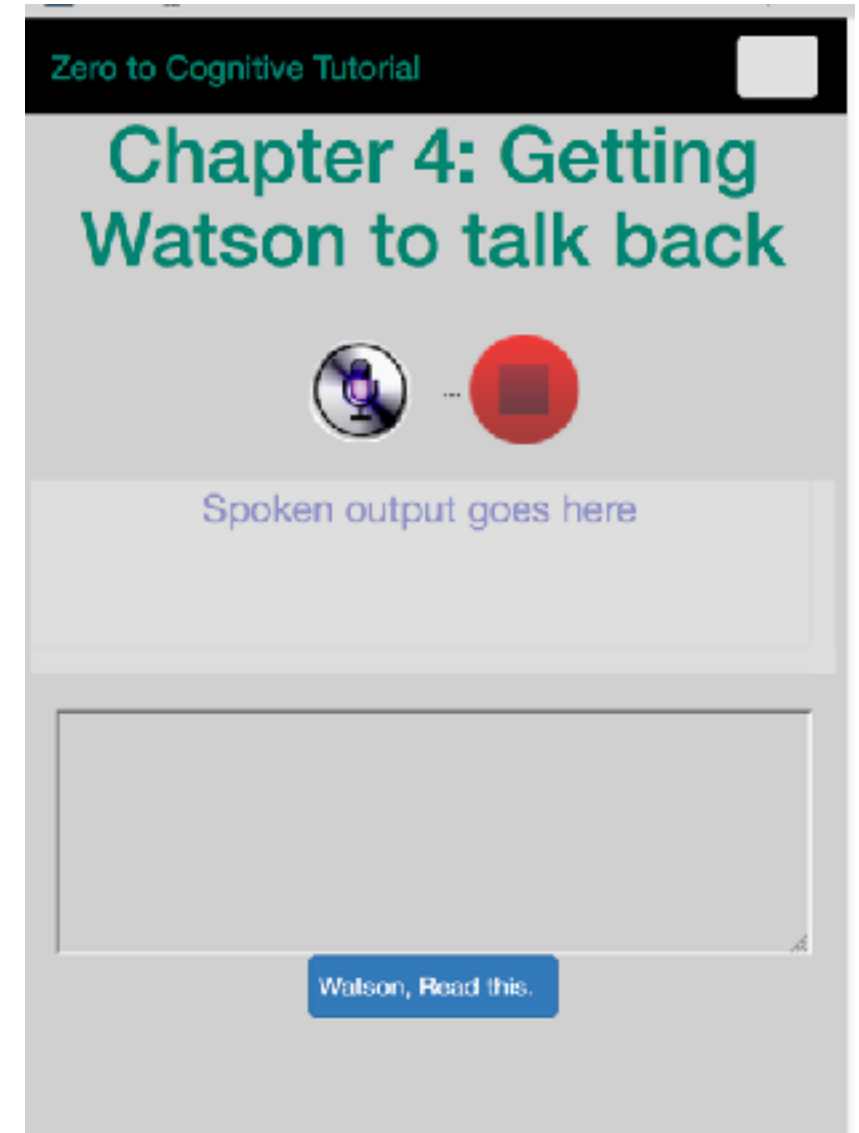# Chapter 4: Getting Watson to talk back

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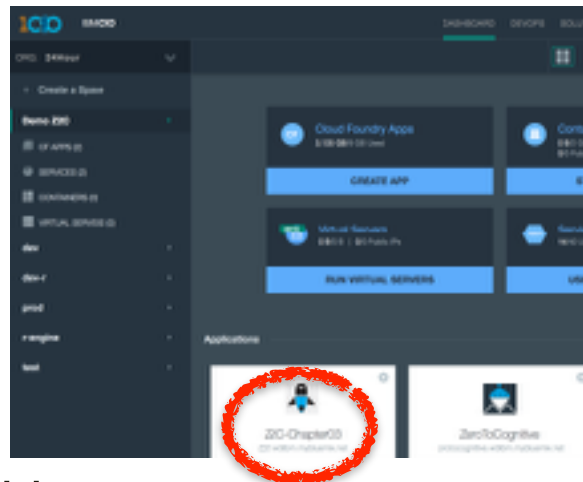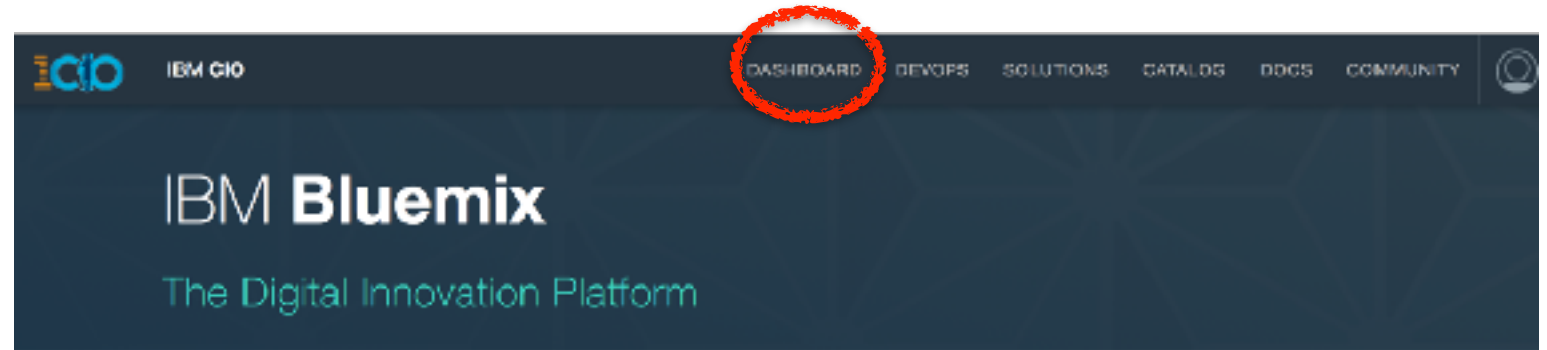Bob Dill, IBM Distinguished Engineer, CTO Global Technical Sales

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Chapter 4: Getting Watson to talk back to you

- Get the Watson Text to Speech Service
- Accessing your Watson credentials
- Telling Watson what to say
- The interaction flow

Watson Speech to Text

- Add the service:

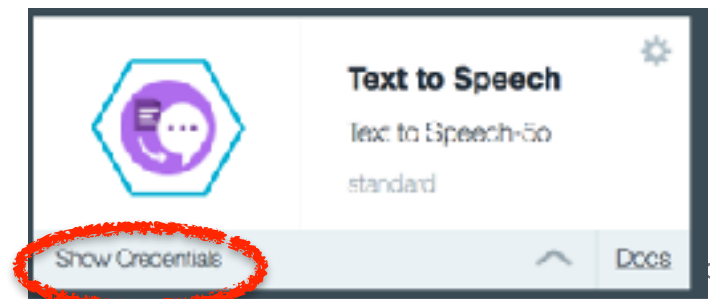 - Go to your Bluemix dashboard and to your app.

  - Add a service or API

  - Select Watson Text to Speech

  - Get your credentials

Update your env.json file

- add a second JSON object to the file and insert your text to speech credentials.

```json
{
    "speech_to_text": {
        "version": "v1",
        "url": "https://stream.watsonplatform.net/speech-to-text/api",
        "password": "your watson speech to text password",
        "username": "your watson speech to text user name"
    },

    "text_to_speech": {
        "version": "v1",
        "url": "https://stream.watsonplatform.net/text-to-speech/api",
        "password": "your watson text to speech password",
        "username": "your watson text to speech user name"
    }
}
```

Add a new function to the controller speech_to_text file

```
22
23    exports.tts_synthesize = function(req, res) {
24      console.log("tts_synthesize entered");
25
26    }
```

update index.html

- Add rows to support a input text area, a 'read this text' button, and a player.

```html
48    <div class="row">
49        <br/>
50        <div class="col-md-6"><center><textarea class="text-only" id="chat" rows="5" cols="50" ></textarea></ce
51    </div>
52    <div class="row">
53        <div class="col-md-6"><center><a id="readText" class="btn btn-primary" style="padding-left: 0.3em">Wat
54    </div>
55    <div class="row"><div class="col-lg-12 col-md-12 col-sm-12">
56        <div class="audioParent">
57            <audio class="audio" id="a_player">
58            Your browser does not support the audio element.
59            </audio>
60        </div>
61    </div></div><!-- row -->
```

update z2c-speech

- Add a new event listener to the initPage function:

```
readText.on("click",  function() {
        console.log("initiating text-to-speech service...");


    });
```

- Add a new function to the file

```
48   function onCanplaythrough() {
49       console.log('onCanplaythrough');
50
51   }
```

You've done it!! Congratulations

- At this point, you have successfully used your second Watson service, text to speech.

The Plan: 30 minute Chapters with an hour or two of practice

1. The Story, Architecture for this app
2. Setting up Bluemix
3. Building your first Watson App   (Watson Speech to Text)
4. Getting Watson to talk back   (Watson Text to Speech)
5. Understanding Classifiers   (Watson NLC)
6. Creating a custom dialog with Watson   (custom Q&A, session management)
7. Authentication   (puts C2 thru 6 together)
8. Alchemy News   (Watson Alchemy)
9. Visual Recognition and Images   (Watson Visual Recognition)
10. Watson Conversations   (Watson Conversations)
11. Rank & Retrieve   (Watson Alchemy + Rank & Retrieve)
12. Getting started on my first client prototype   Design Thinking, Stories, Architecture, Keeping it simple

Chapter 5: Understanding Classifiers

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Bob Dill, IBM Distinguished Engineer, CTO Global Technical Sales

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