Hackathon @ First Data

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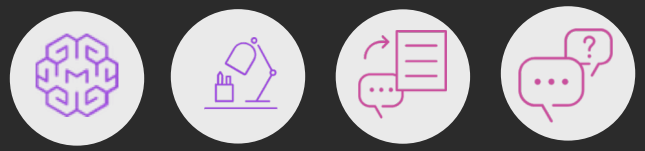
IBM Developer

IBM Cloud Offerings

Artificial Intelligence

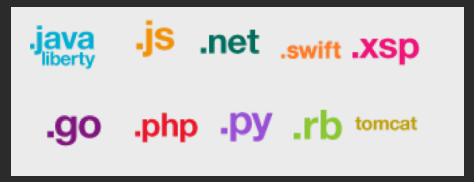


Blockchain

IoT

Analytics

Runtimes

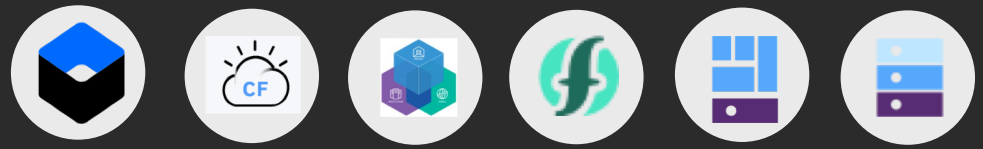


Integration

Dev Tools

Web Mobile

Deploy



Databases

NoSQL

SQL

http://ibm.biz/fd-hack

First Data hackathon instructions for IBM Cloud

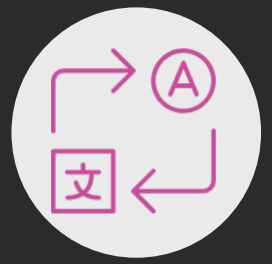
Create your IBM Cloud ID.
Upgrade Lite to trial account.
Provision services.

AI Services & Tools

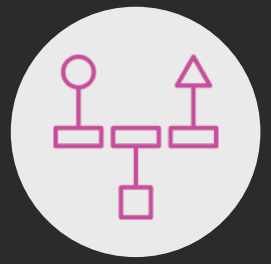
Language

Assistant

Natural Language Understanding



Language Translator



Natural Language Classifier

Personality Insights

Tone Analyzer

Speech

Speech to Text

Text to Speech

Vision

Visual Recognition

Data Insights

Discovery

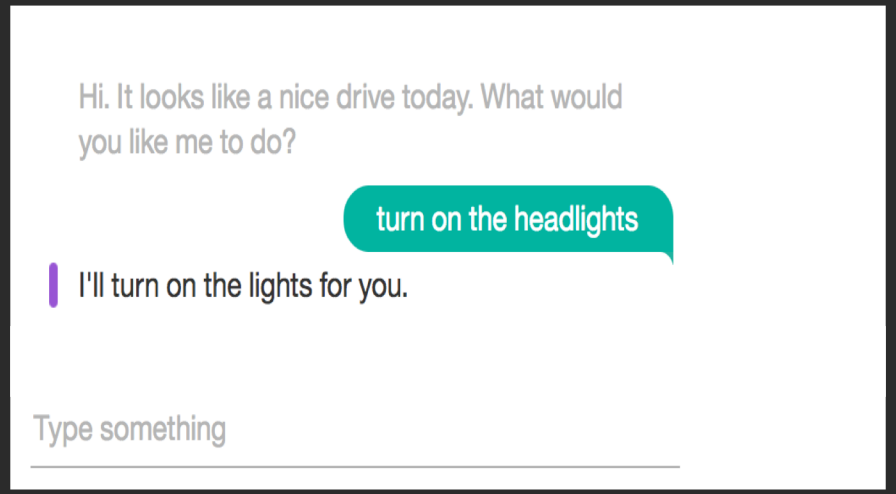
Watson Developer SDKs: https://github.com/watson-developer-cloud

Watson Assistant

Quickly build and deploy chatbots and virtual agents across a variety of channels, including mobile devices, messaging platforms, and even robots.

Sample Use Cases

- FAQ Chatbot
- Customer call center
- Conversational commerce



ibm.biz/demo-assistant

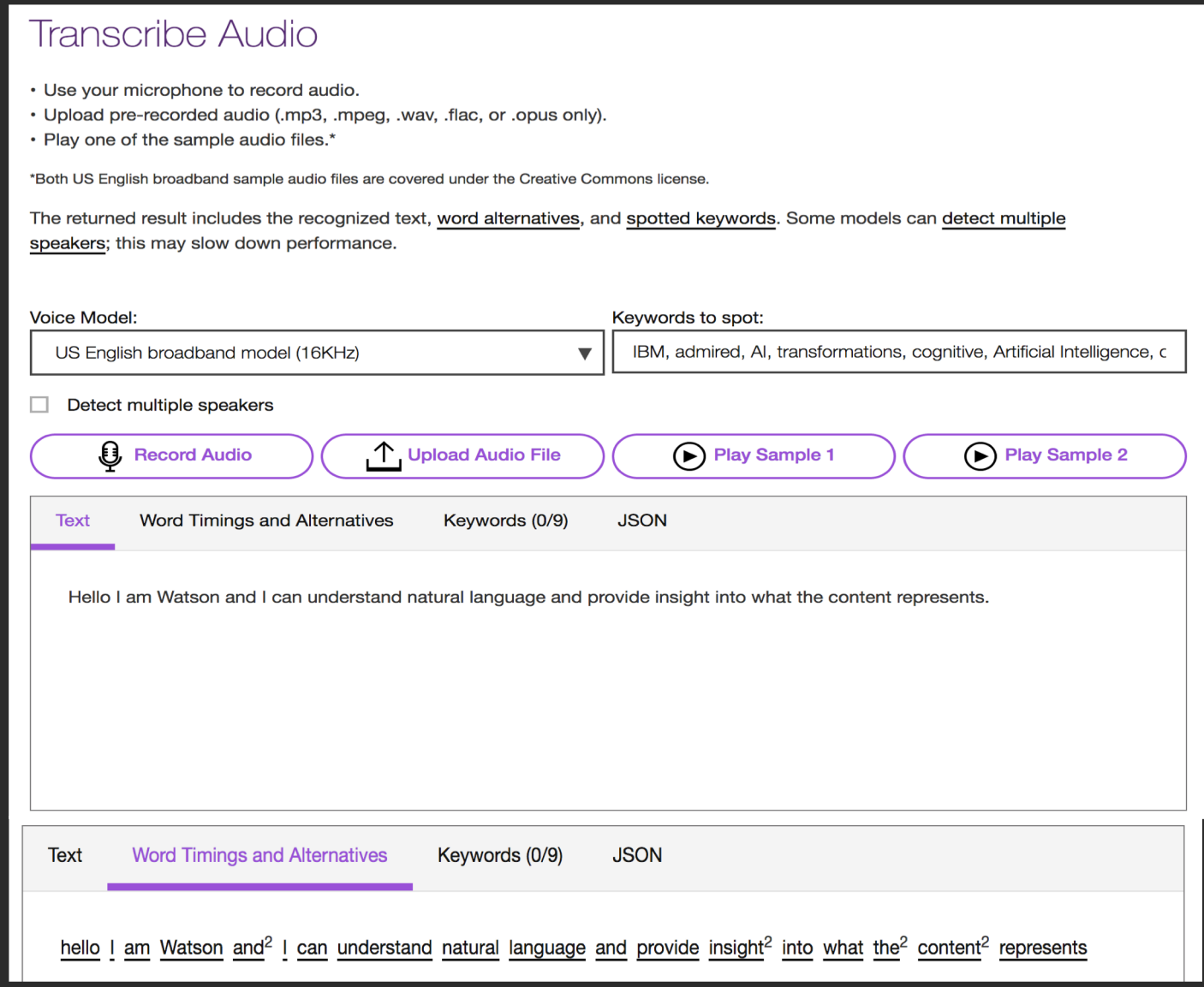
Watson understands


```
{
  "intents": [
    {
      "intent": "turn_on",
      "confidence": 0.9951137542724611
    }
  ],
  "entities": [
    {
      "entity": "appliance",
      "location": [
        12,
        22
      ],
      "value": "lights",
      "confidence": 1
    }
  ],
  "input": {
    "text": "turn on the headlights"
  },
  "output": {
    "text": [
      "I'll turn on the lights for you."
    ],
    "nodes_visited": [
      "Entry Point For On Off Commands",
      "node_2_1467232480480",
      "Appliance On Off Check"
    ],
    "action": {
      "lights_on": ""
    },
    "log_messages": []
  },
  "context": {
    "conversation_id": "bd7963ba-b395-4f1e-b37f-31af3dbe42ce",
```

Speech to Text

Use speech recognition capabilities to convert Arabic, English, Spanish, French, Brazilian Portuguese, Japanese, and Mandarin speech into text.

- Supports custom language and audio models for domain adaptation.



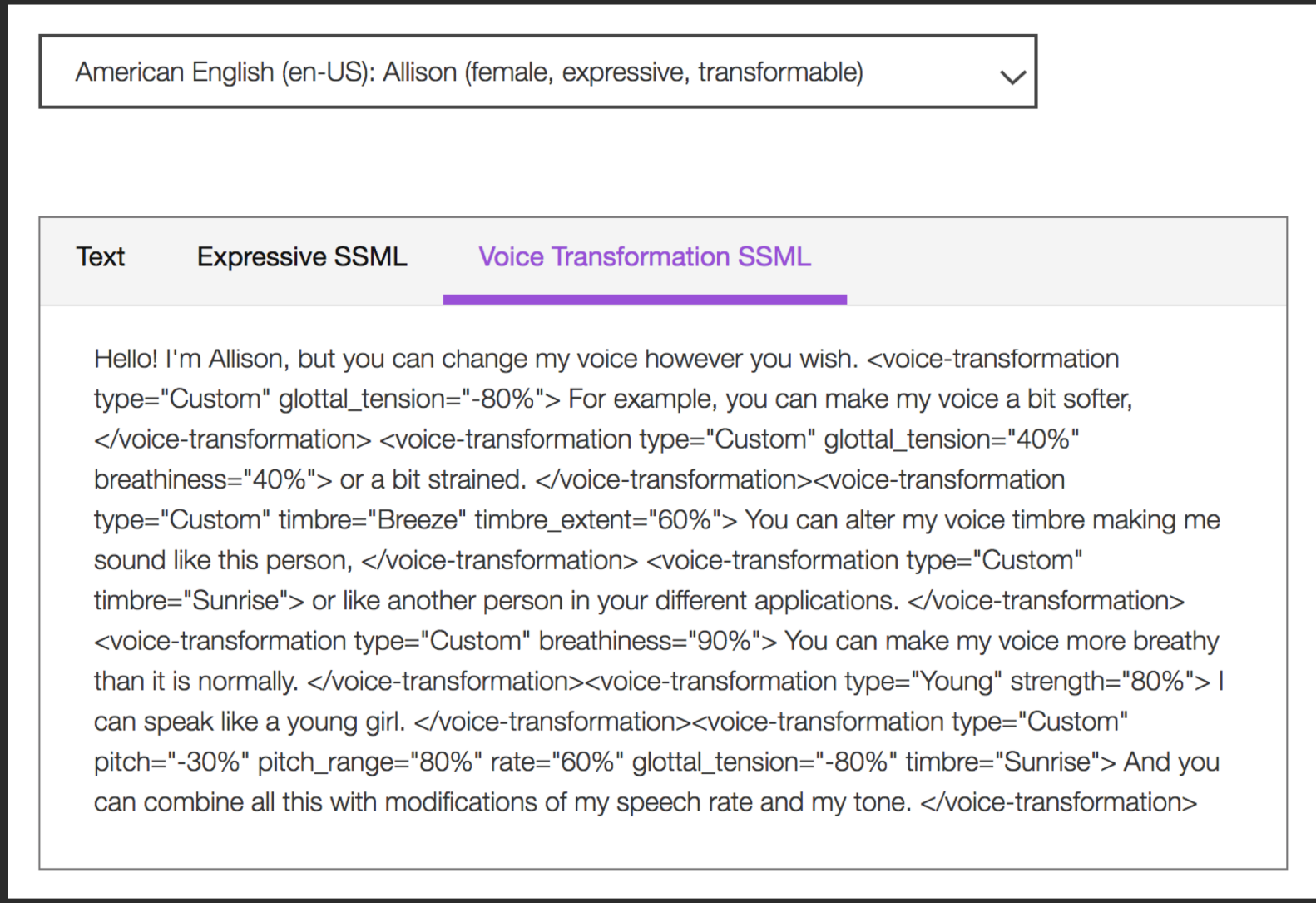
Sample Use Cases

- Call Center Analytics
- Speech enabled chat-bots
- Voice controlled applications/devices

ibm.biz/demo-speech-to-text

Text to Speech

Understand text and natural language to generate synthesized audio output complete with appropriate cadence and intonation. It is available in 13 voices across 7 languages.



ibm.biz/demo-text-to-speech

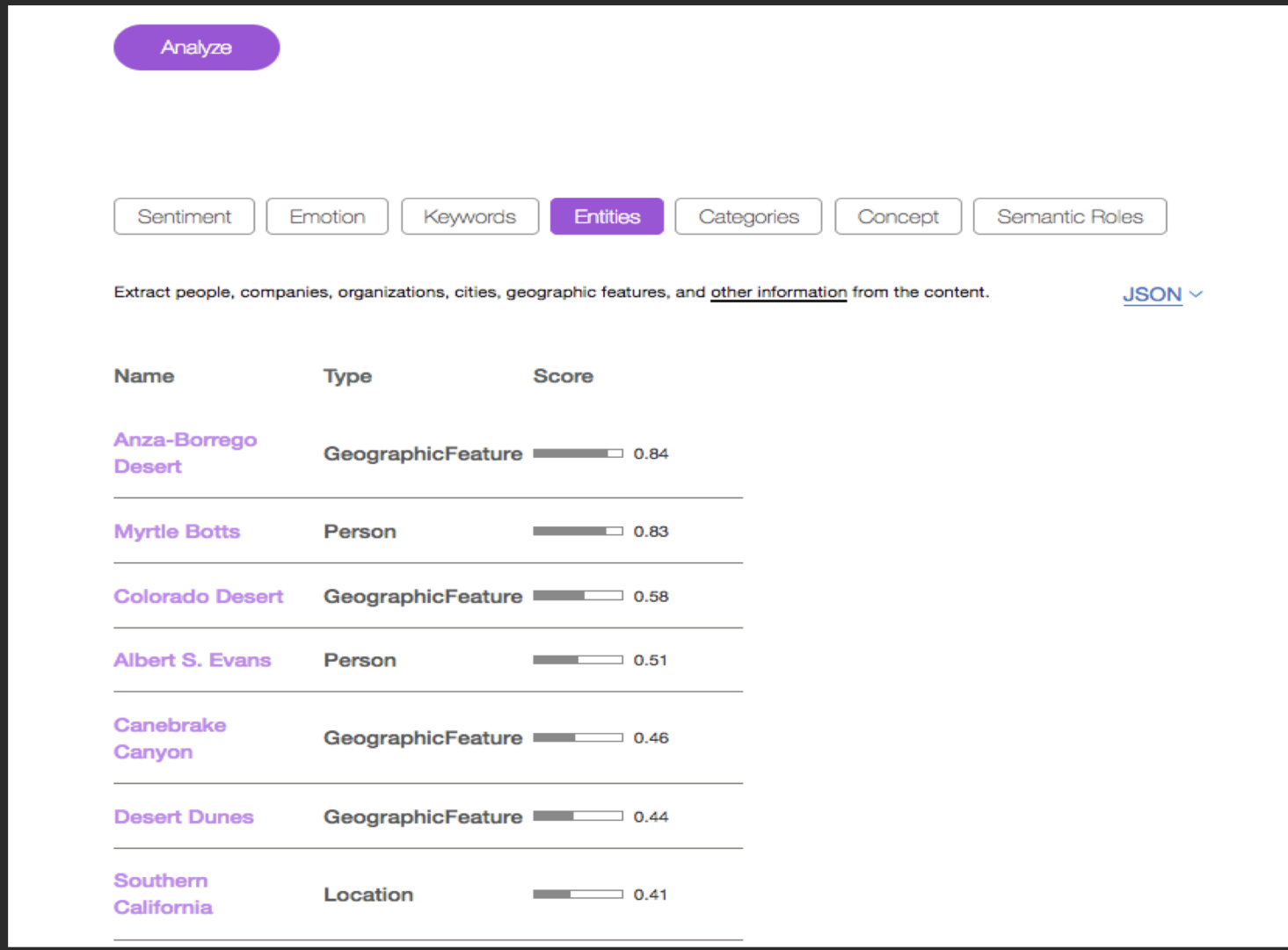
Natural Language Understanding

Text analysis through natural language processing. Analyze text to identify concepts, entities, keywords, sentiment, and more.

- Supports domain-specific models trained with Watson Knowledge Studio for entity and relationship extraction.

Sample Use Cases

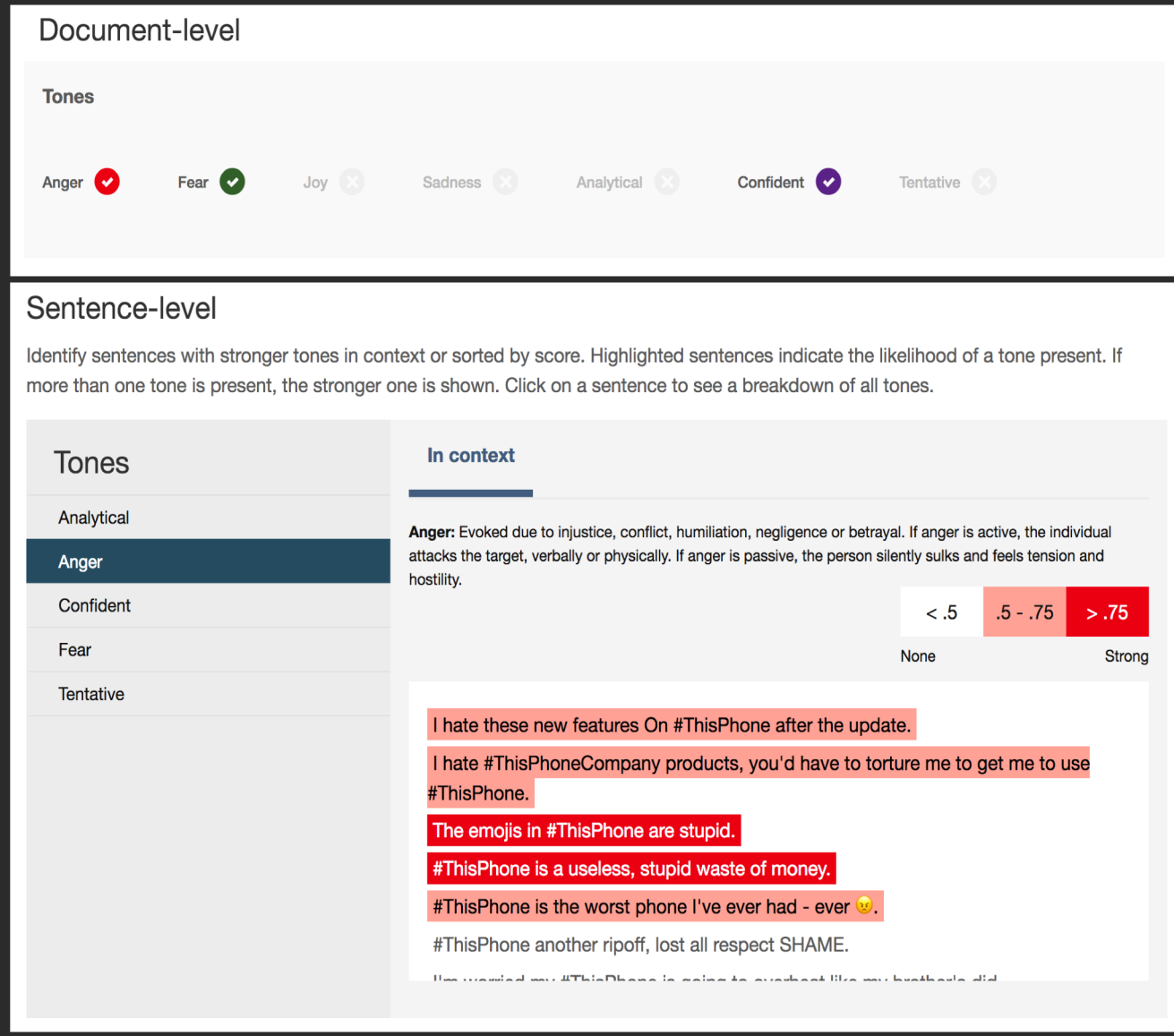
- Content Recommendation
- Advertising Selection
- Data Mining



https://natural-language-understanding-demo.ng.bluemix.net/

Tone Analyzer

Use linguistic analysis to detect joy, fear, sadness, anger, analytical, confident and tentative tones found in text.

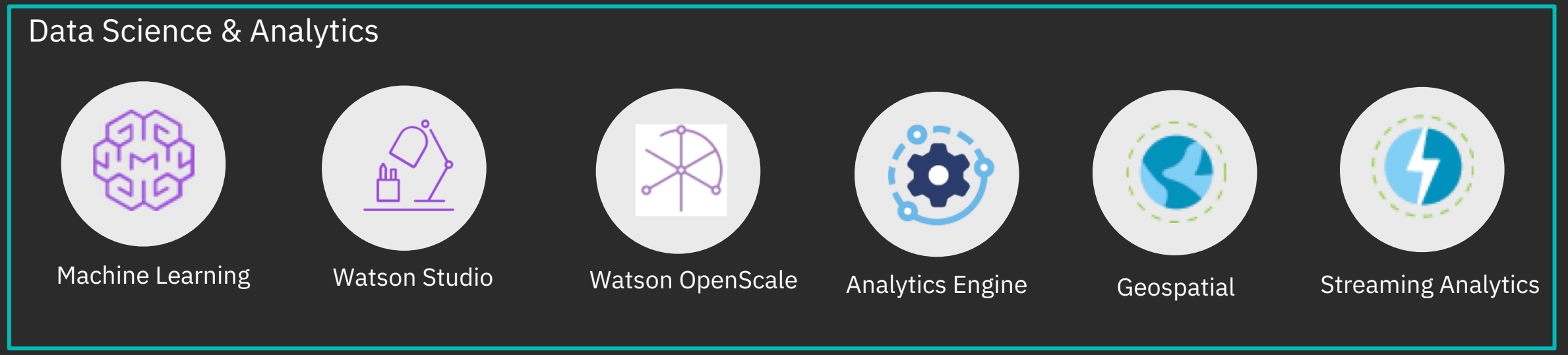


Sample Use Cases

- Monitor Call Center Engagement
- Social Listening
- Conversation escalation

ibm.biz/demo-tone-analyzer

AI Services & Tools



Data science exercises:

Machine Learning: **https://github.com/ibm-ai-education/continuous-learning-with-watson-ml**

Deep Learning : **https://github.com/ibm-ai-education/timeseries-rnn-lab-part1**

Bias Detection : **https://cloud.ibm.com/docs/services/ai-openscale?topic=ai-openscale-gettingstarted#gs-setup**

ibm.biz/model-exchange

Model Asset Exchange

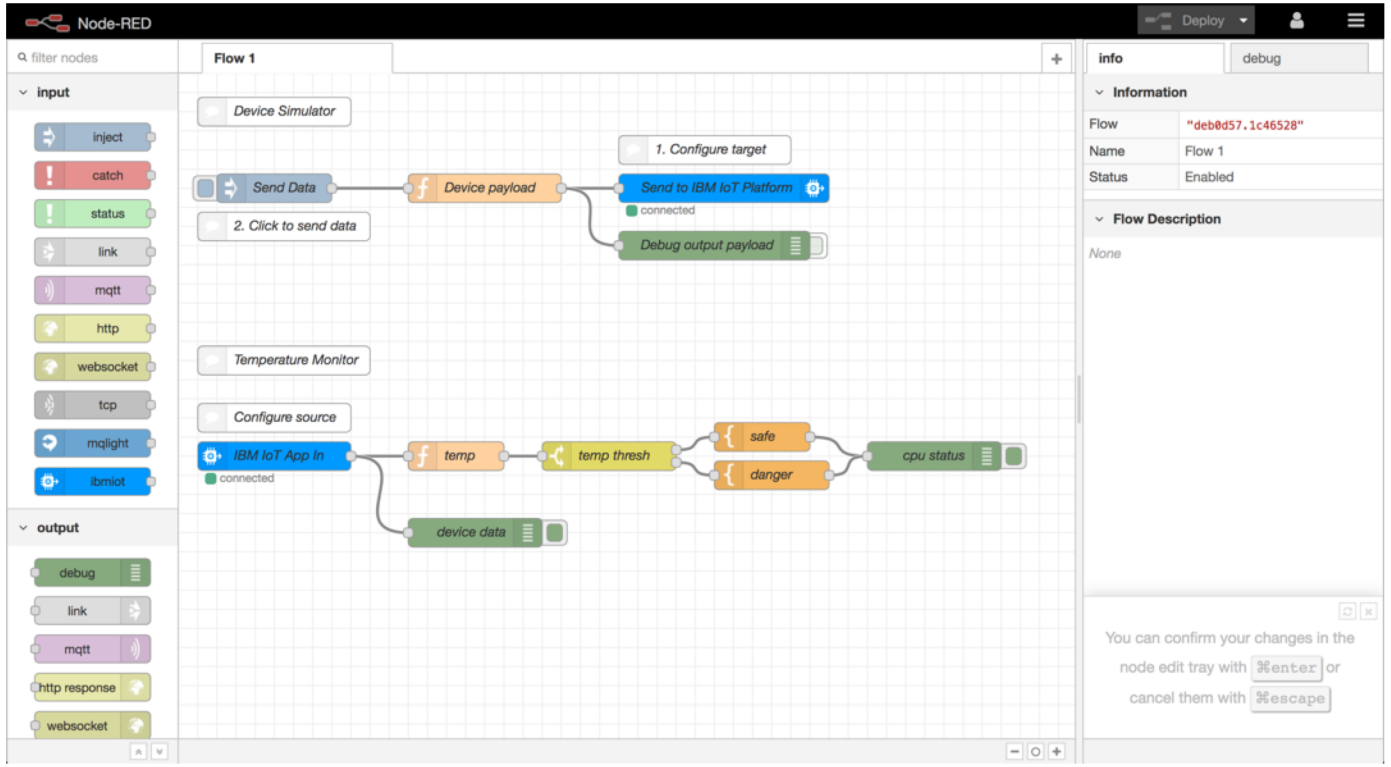
The Model Asset Exchange (MAX) is a one stop shop for developers/data scientists to find and use **free** and **open source** deep learning models

Rapid Development and Deploy

Node-Red
Cloud Foundry
Cloud Functions

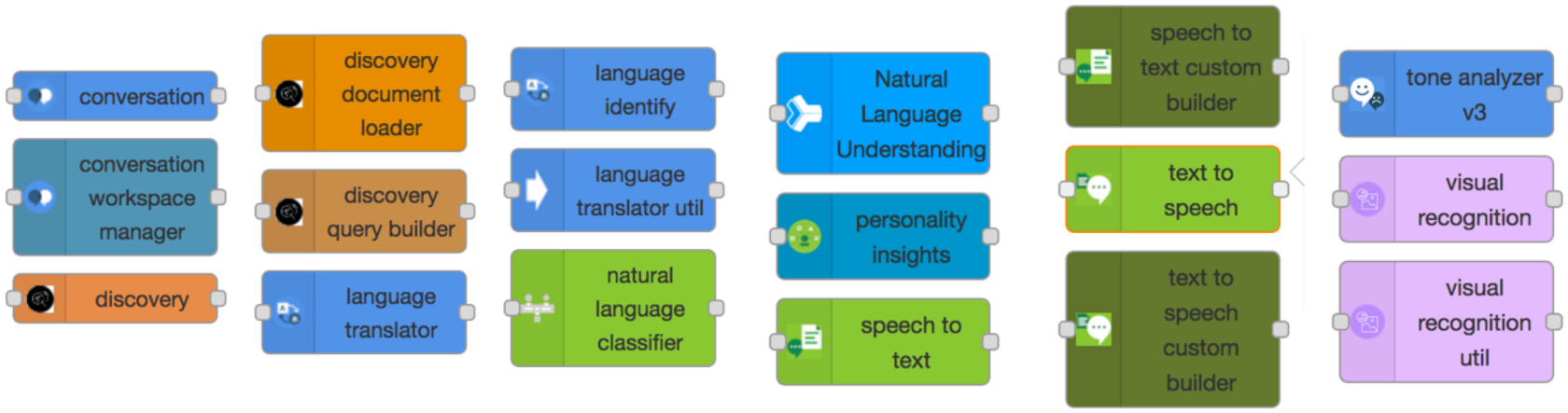
Watson IoT and Node-RED

Quickly build flow-based applications handling sensor events



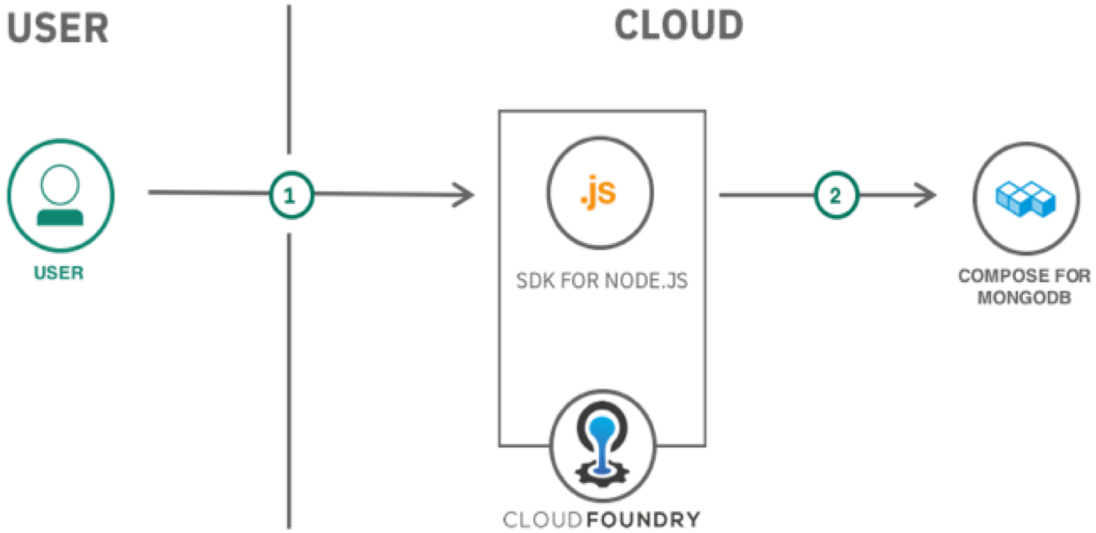
IoT device input / output nodes

And Watson nodes



Rapid Deploy

Cloud Foundry runtimes
deploy app without managing infrastructure.
Java, Node.js, Swift, ASP.NET Core, Python, PHP, Ruby, Go...



Cloud Functions "serverless"
trigger actions from events
or REST API calls

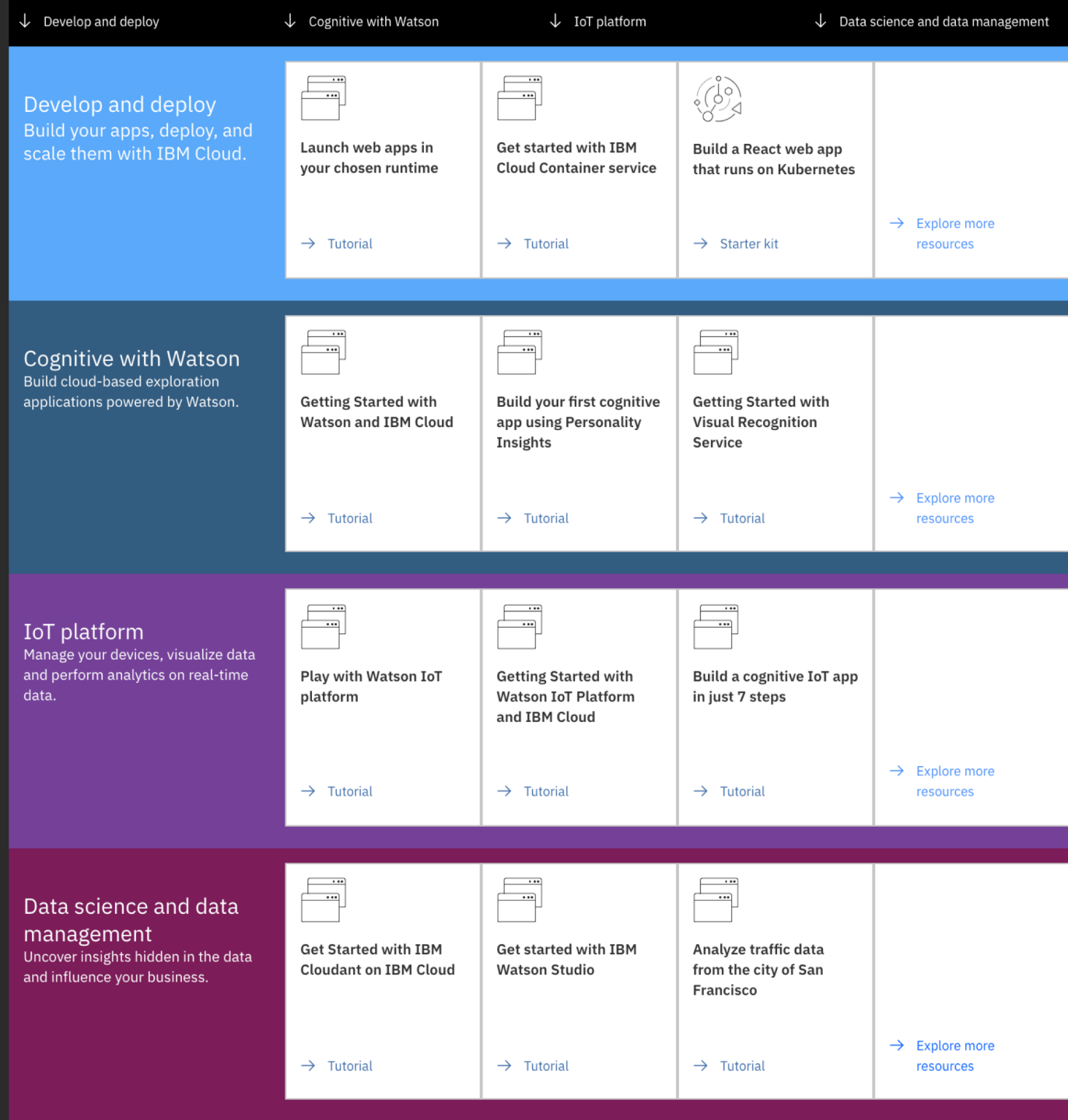
Get Started with IBM Cloud

Starter kits, tutorials, blogs, articles, webinars and videos

https://www.ibm.com/cloud/get-started

https://cloud.ibm.com/catalog?category=starterkits

IBM **Developer**



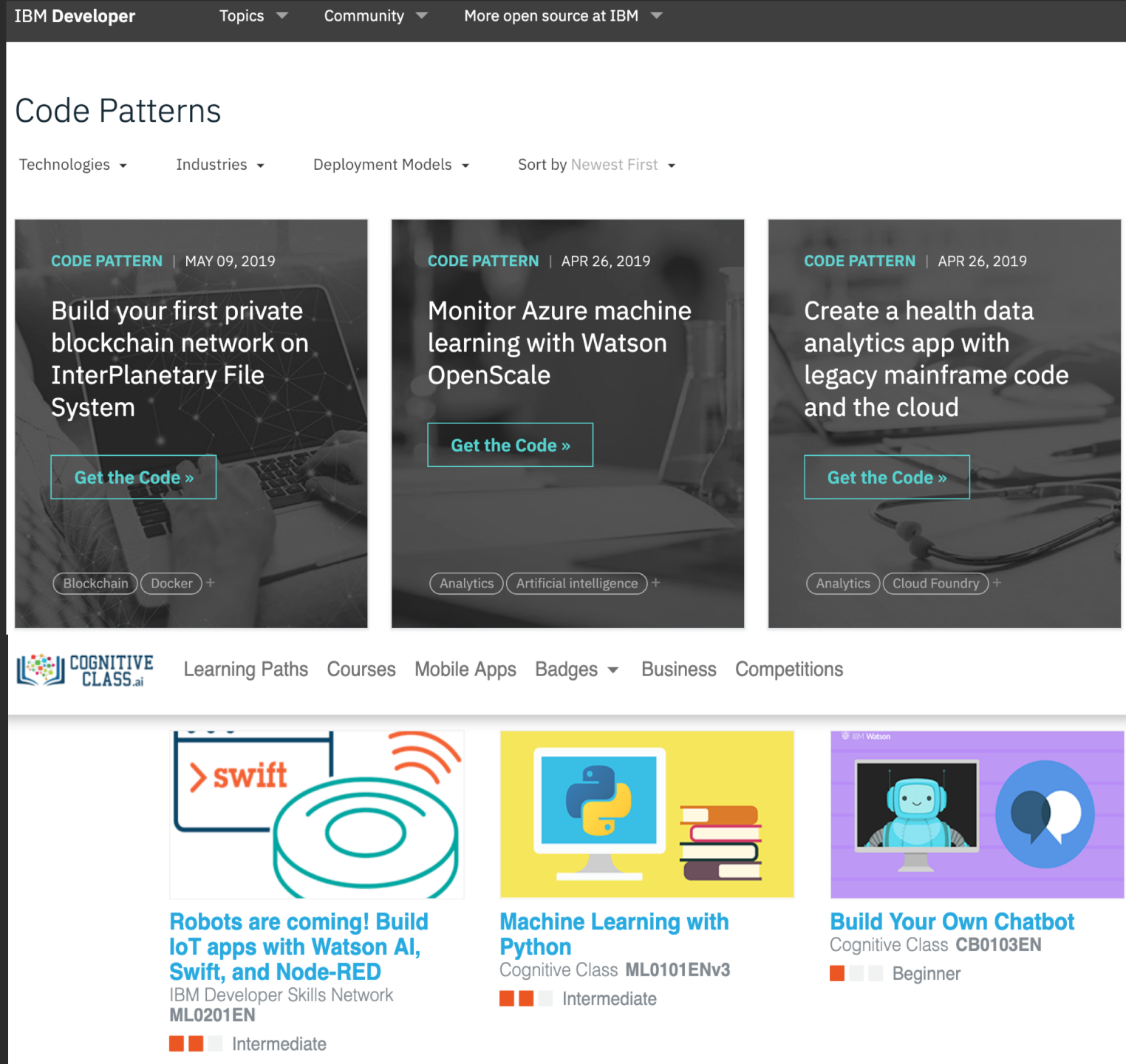
Learning Resources

IBM Developer
Code patterns

https://developer.ibm.com/patterns/

Cognitive Class
Courses & Learning paths

https://cognitiveclass.ai/courses/



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