

How to do AI, IoT and ML with IBM i

Integrating AI with your IBM i

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@rcruicks

IBM Developer

Give your
data **a lift**
with machine
learning -

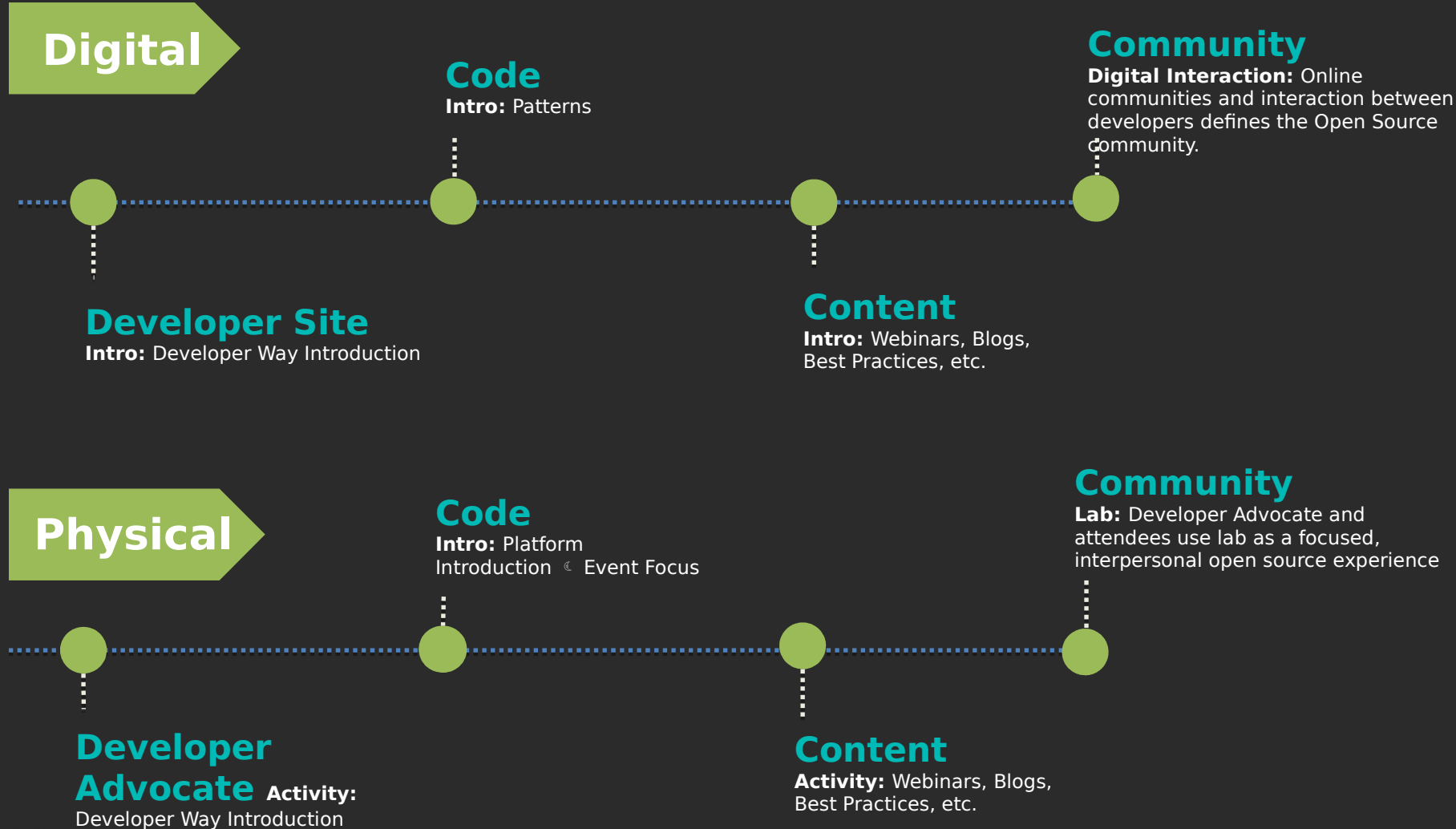


Get to **Watson Cognitive** and
PowerAI Vision working for
you through simple APIs

IBM Developer Code Experience

Creating a Consistent Experience in Both Digital and Physical Interactions

Federated & Franchise



Aligning the **Digital Developer** experience with the **Physical Developer** experience reinforces the concept of Code, Content, and Community.



Code



Content



Community

Integrating AI handy links

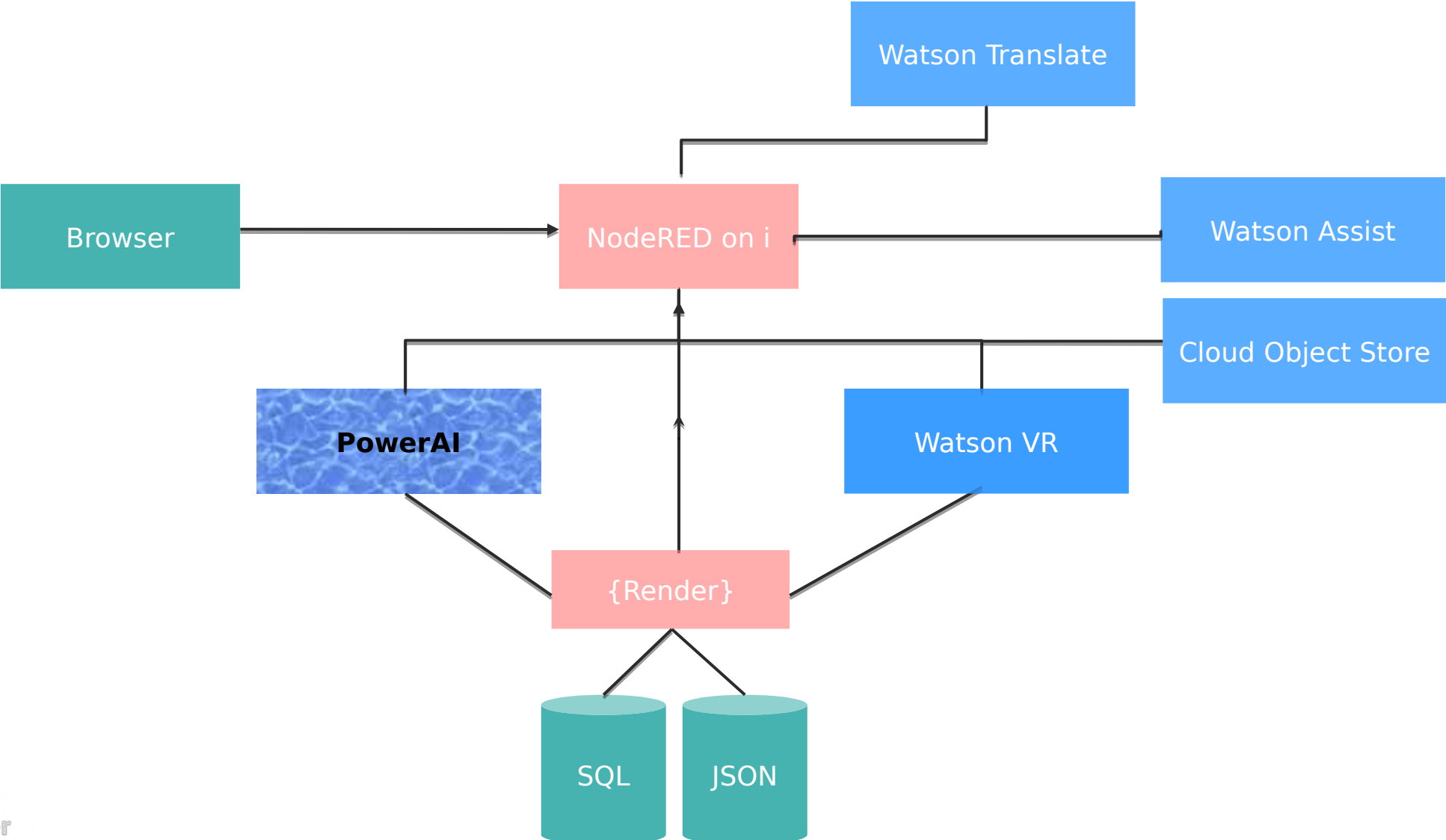
- <https://developer.ibm.com/tutorials/powerai-vision-object-detection/>
- <https://developer.ibm.com/articles/i-watson-language-translator/>
- <https://ibm.com/developerworks/ibmi/library/i-incorporating-web-service/>
- <https://ibm.com/developerworks/ibmi/library/i-running-node-red/>
- <https://nodered.org>

Integrating AI

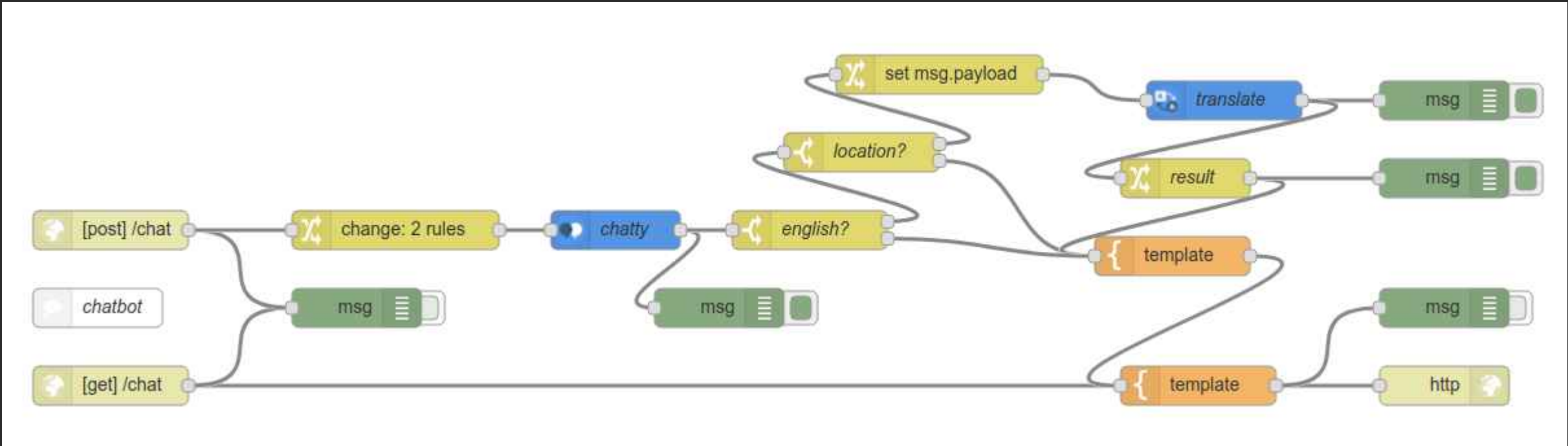
- **Watson Cognitive API**
 - Language Translation
- **PowerAI**
 - AI Vision
- **Integration points**
 - Db2 for I web access
 - Java
 - **NodeRed**



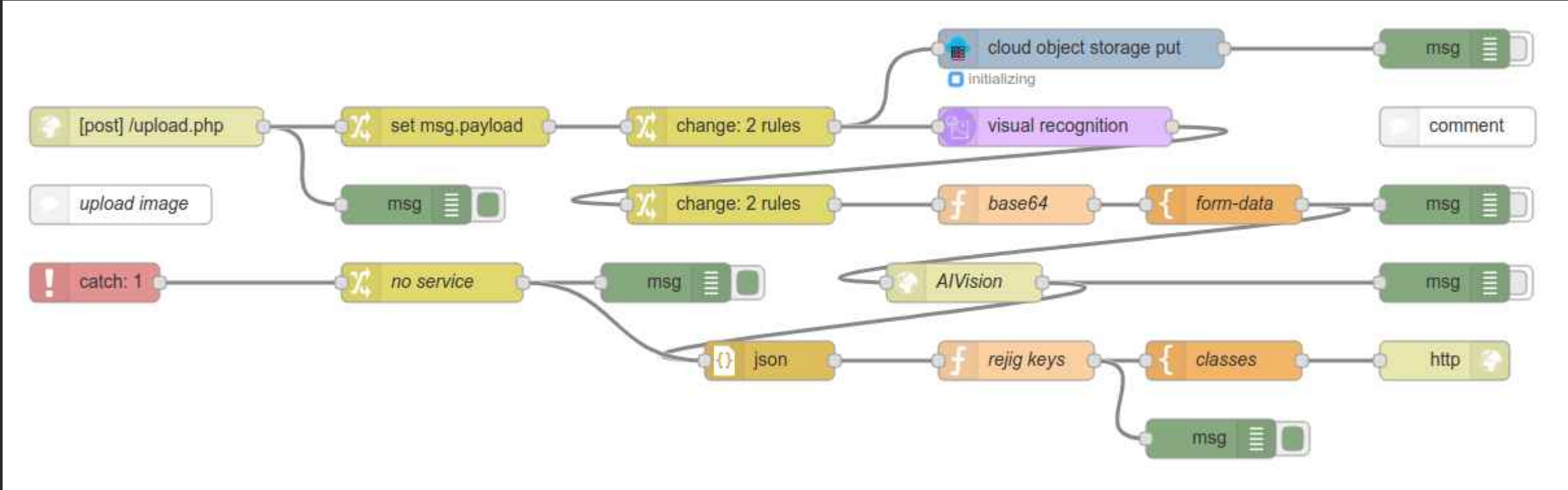
Linking IBMi and AI with NodeRED



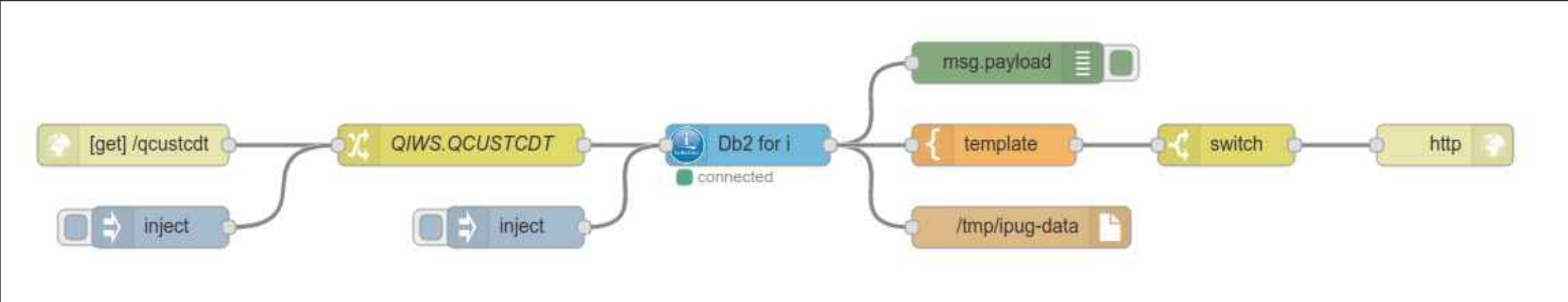
IBMi chatbot (with translation)



IBMi image classifier (Watson & AI vision)



IBMi file I/O (Db2i & STMF)



IBM POWER AI

- PowerAI
 - AI Vision
- Integration points
 - AC922
 - S822LC
 - IBM Cloud
 - PDP/Nimbix



PowerAI Vision

Image classifier

Object detector

via IBM PDP Cloud

<https://developer.ibm.com/linuxonpower/deep-learning-powerai/try-powerai/>
IBM Developer

Try PowerAI Vision

<https://developer.ibm.com/linuxonpower/deep-learning-powerai/try-powerai/>

IBM PowerAI Vision as a Service

IBM PowerAI Vision provides tools and interfaces for business analysts, subject matter experts, and developers without any skill in deep learning technologies to begin using deep learning. The tools assist user to focus on rapidly identifying datasets, labeling them, and building models for inference.

If you want to take a test drive

→ [Register for a 3-day trial of PowerAI Vision](#)

If you have a Nimbix Cloud account

→ [Register for access](#) (Search for PowerAI Vision)

If you do not have a Nimbix Cloud account

→ [Register for access](#) (Fill out the form to request access)

PowerAI Vision sample training

IBM PowerAI Vision admin

My Data Sets / cars


Update Data Set - Vehicle / cars Export As Zip File

My Workspace

- My Data Sets
- My DL Tasks
- My Trained Models
- My Web APIs

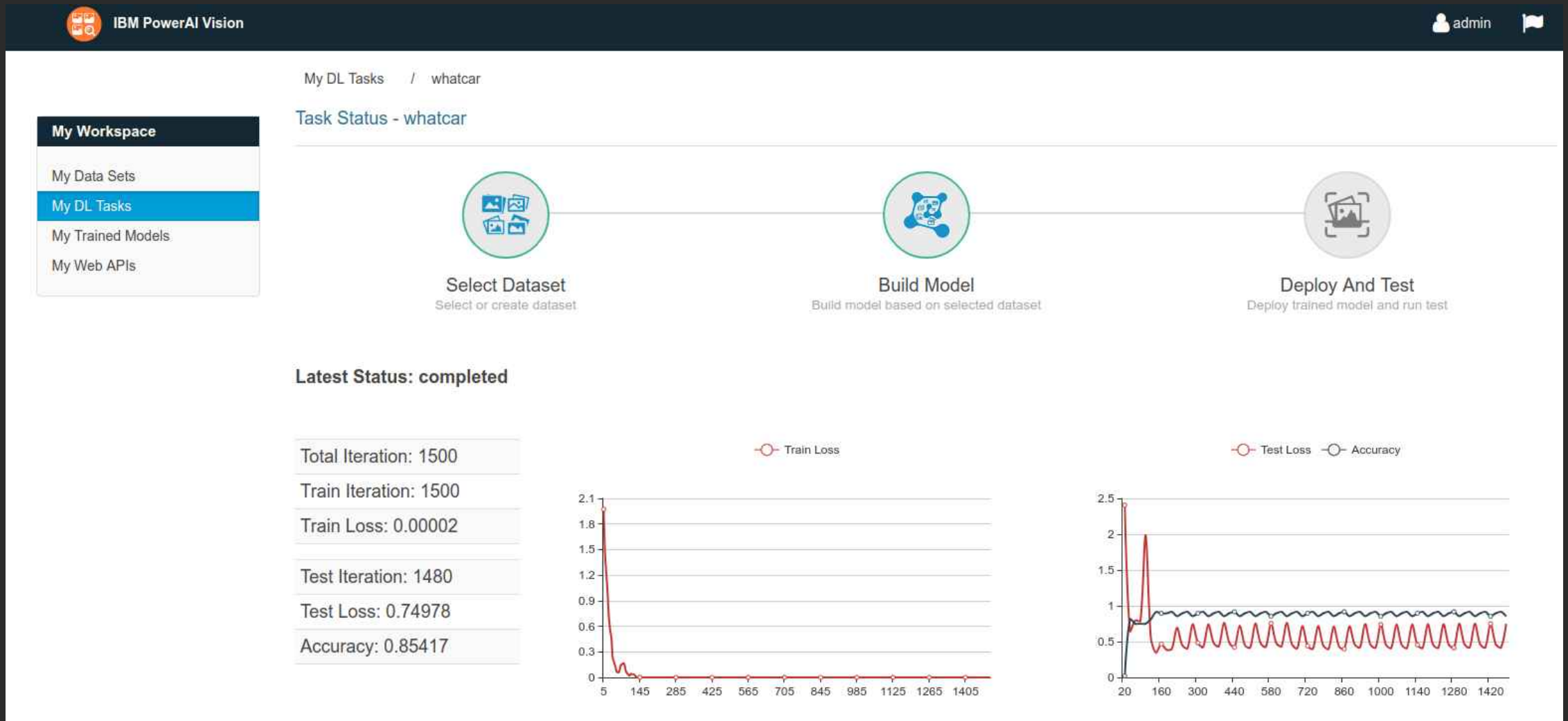
sedan pickup

Upload pictures (jpg / png) by dropping them here Or




Total: 10, Page Count: 1

PowerAI Vision sample training




PowerAI Vision sample testing

 IBM PowerAI Vision

My Web APIs / da308bf8-89bd-4c71-a4f6-7521938ec588


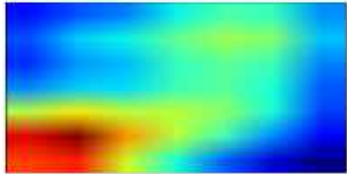
Run Test - da308bf8-89bd-4c71-a4f6-7521938ec588

Upload a picture to classify:

 Upload pictures (jpg / png) by dropping them here Or

Or input image URL to classify:

Result:

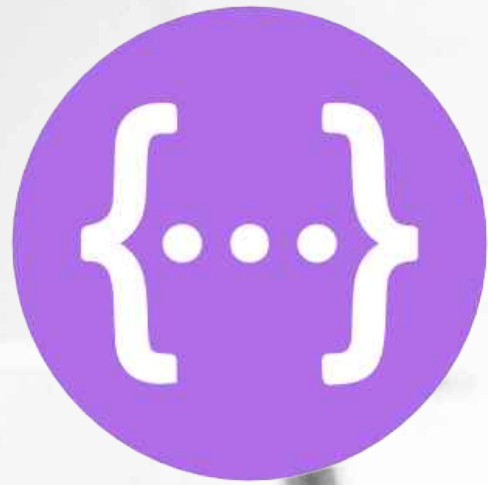
 



Watson Cognitive

Language Translator
Via IBM Cloud

<https://console.bluemix.net/catalog/services/language-translator>
IBM Developer



Watson API Demos

<https://console.bluemix.net/developer/watson/starter-kits>

Integrating AI

- **Watson Cognitive API**
 - Language Translation
 - Speech (s2t, t2s)
 - Visual Recognition
 - Discovery
 - ...



IBM Watson Cognitive API access

The screenshot shows the IBM Cloud Catalog interface. The browser address bar displays <https://console.ibm.com/catalog?category=ai>. The page title is "Catalog". On the left, there is a navigation menu with "All Categories" and a list of categories including Compute, Containers, Networking, Storage, AI (highlighted), Analytics, Databases, Developer Tools, Integration, Internet of Things, Security and Identity, Starter Kits, Web and Mobile, and Web and Application. The main content area displays a grid of service cards for various Watson Cognitive APIs. Each card includes an icon, the service name, its status (e.g., "Lite • IBM"), and a brief description. The services shown are: Watson Assistant (formerly Conversation), AI OpenScale, Compare Comply, Discovery, Knowledge Catalog, Knowledge Studio, Language Translator (highlighted with a mouse cursor), Machine Learning, Natural Language Classifier, Natural Language Understanding, Personality Insights, Speech to Text, Text to Speech, Tone Analyzer, Visual Recognition, and Watson Studio. A search bar at the top of the catalog area contains the text "Search the catalog...".

<https://console.ibm.com/catalog/services/language-translator>



Watson IoT Platform

<https://watson-api-explorer.ng.bluemix.net/>

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IBM Watson Internet of Things Platform

IBM Watson IoT Platform

Quickstart


No sign-up required to see how easy it is to connect your device to Watson IoT Platform and view live sensor data

● Last message received at 2:27:28 PM

iicibmirdc status.temperature

30
25
20
15
10
5

I've seen my data, what next?

 Use your device in an application created with IBM Bluemix.

Click [here](#) for more details.

Go to your Bluemix account

IBM Watson Internet of Things Platform

```
                                /QOpenSys/usr/bin/-sh
$
> curl "127.0.0.1:1880/iot?temp=30&humid=88.5&time=14:03:22"
{
  "d":
  {
    "temperature": 30
    ,"humidity": 88.5
    ,"timestamp": "14:03:22"
  }
}$

===>
```

F3=Exit	F6=Print	F9=Retrieve	F11=Truncate/Wrap
F13=Clear	F17=Top	F18=Bottom	F21=CL command entry

Thank you



ibm.com/developerworks/library/



twitter.com/rcruicks



github.com/rcruicks



github.com/IBMCodeLondon



developer.ibm.com





IBMi and the open source ecosystem

