Project Report

Name : Atira Bagwan (atirabagwan@gmail.com)

Title : Intelligent Customer Help Desk With Smart Document Understanding

Category: Artificial Intelligence

Internship at smartinternz.com

Project Overview:

We will use various IBM cloud services such as Watson Assistant, Watson discovery, Cloud functions, Node Red to create smart customer helper chatbot.

- Project Requirements: Python, IBM Cloud, IBM Watson, Node-js
- Functional Requirements: IBM cloud
- Technical Requirements: AI,ML,WATSON AI,PYTHON
- Software Requirements: Watson assistant, Watson discovery.
- Project Deliverables: Smartinternz Intership
- Project Team: Atira Bagwan
- Project Duration:19 days

Project Description:

Typical chat bot can answer simple questions , which comes under it's predefined question set. It can also make appointments. But whenever any question is asked which is beyond it's predetermined question set it asks user that it is invalid question or it asks them to talk to real person. In this project if customer wants to know about operation of device the application shall pass the question to watson discovery service which has been pre-loaded with the device's owners manual.So now, instead of "Would you like to speak to a customer representative?" we can return relevant sections of the owners manual to help solve our customers' problems.

Scope of Work

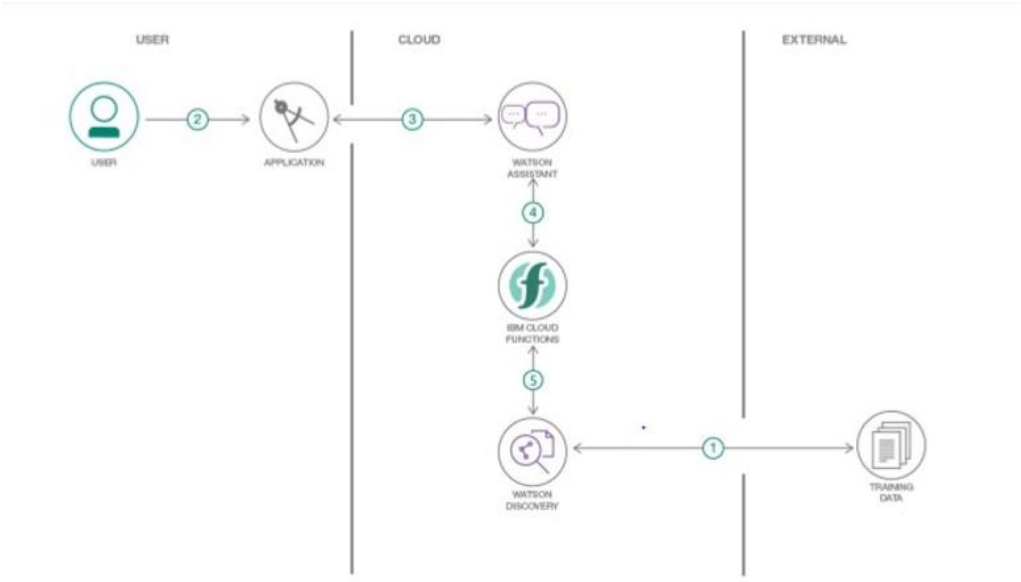
→Create a customer care dialog skill in Watson Assistant

→Use Smart Document Understanding to build an enhanced Watson Discovery collection

→Create an IBM Cloud Functions web action that allows Watson Assistant to post queries to Watson Discovery

→Build a web application with integration to all these services & deploy the same on IBM Cloud Platform

Flow diagram :



1. The document is annotated using Watson Discovery SDU

2. The user interacts with the backend server via the app UI. The frontend app UI is a chatbot that engages the user in a conversation.

3. Dialog between the user and backend server is coordinated using a Watson Assistant dialog skill.

4. If the user asks a product operation question, a search query is passed to a predefined IBM Cloud Functions action.

5. The Cloud Functions action will query the Watson Discovery service and return the results

Steps:

1. Create IBM Cloud services

2. Configure Watson Discovery

3. Create IBM Cloud Functions action

4. Configure Watson Assistant

5. Create flow and configure node

6. Deploy and run Node Red app.

1.Create IBM Cloud services

Create the following services:

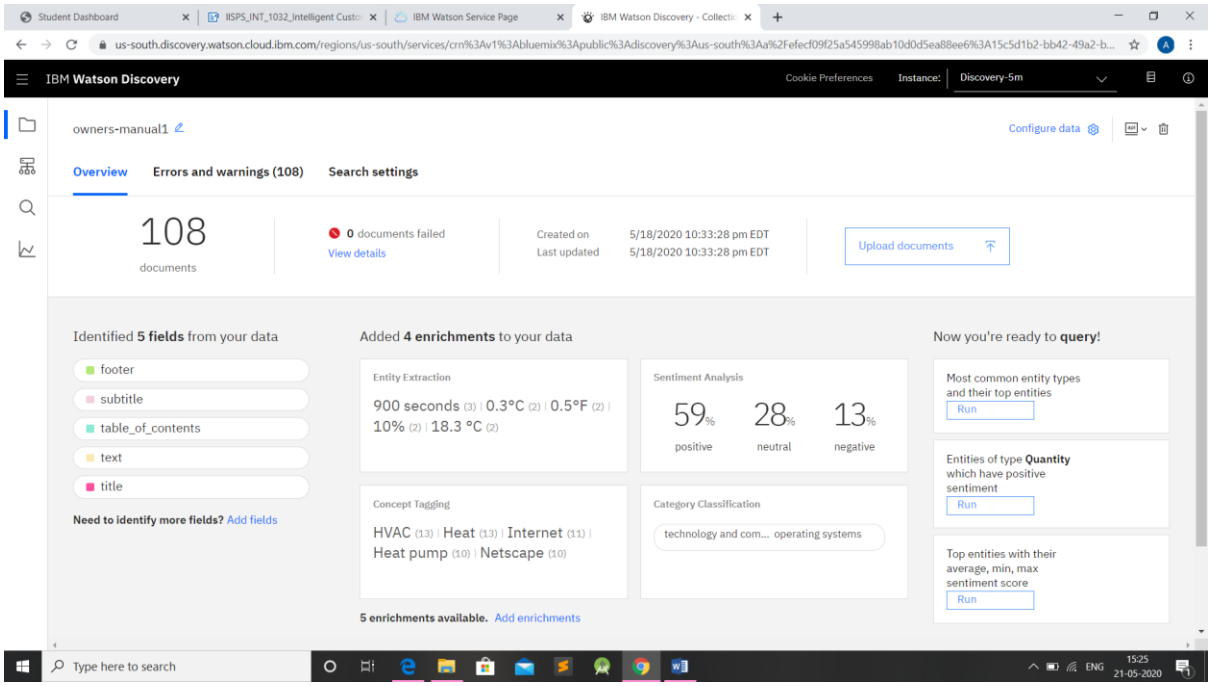
- Watson Discovery
- Watson Assistant
- Node Red

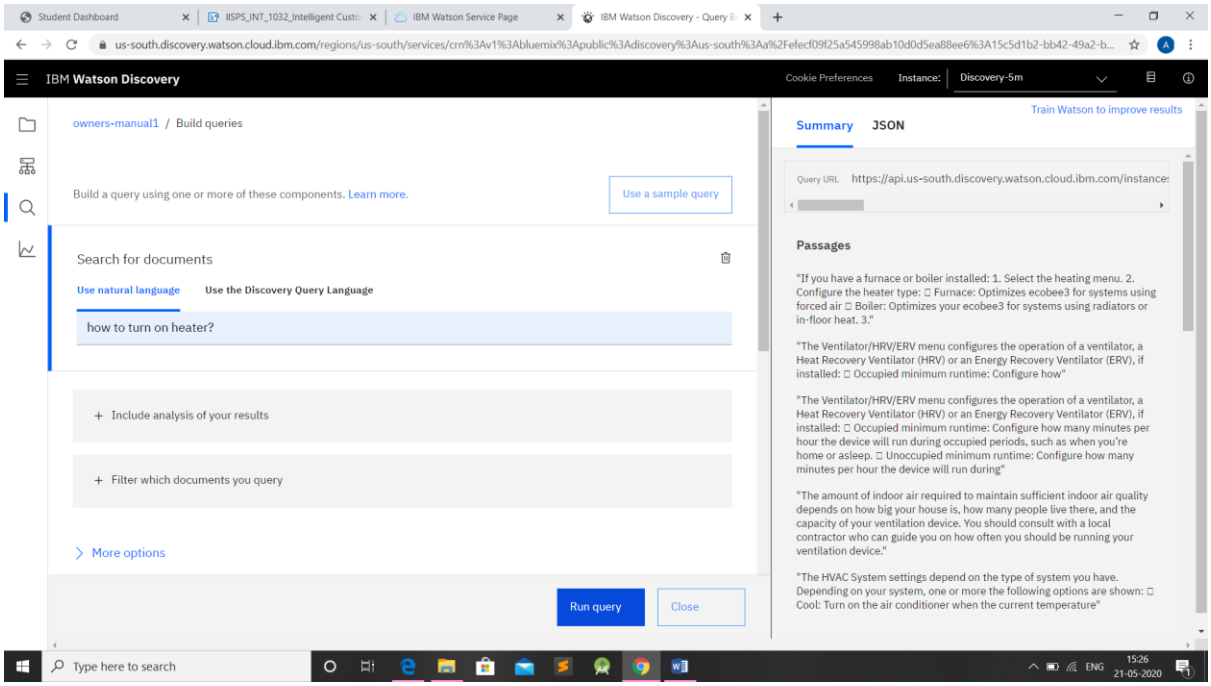
2. Configure Watson Discovery

Import the document

Launch the Watson Discovery tool and create a new data collection by selecting the Upload your own data option. Give the data collection a unique name. When prompted, select and upload the ecobee3_UserGuide.pdf file.

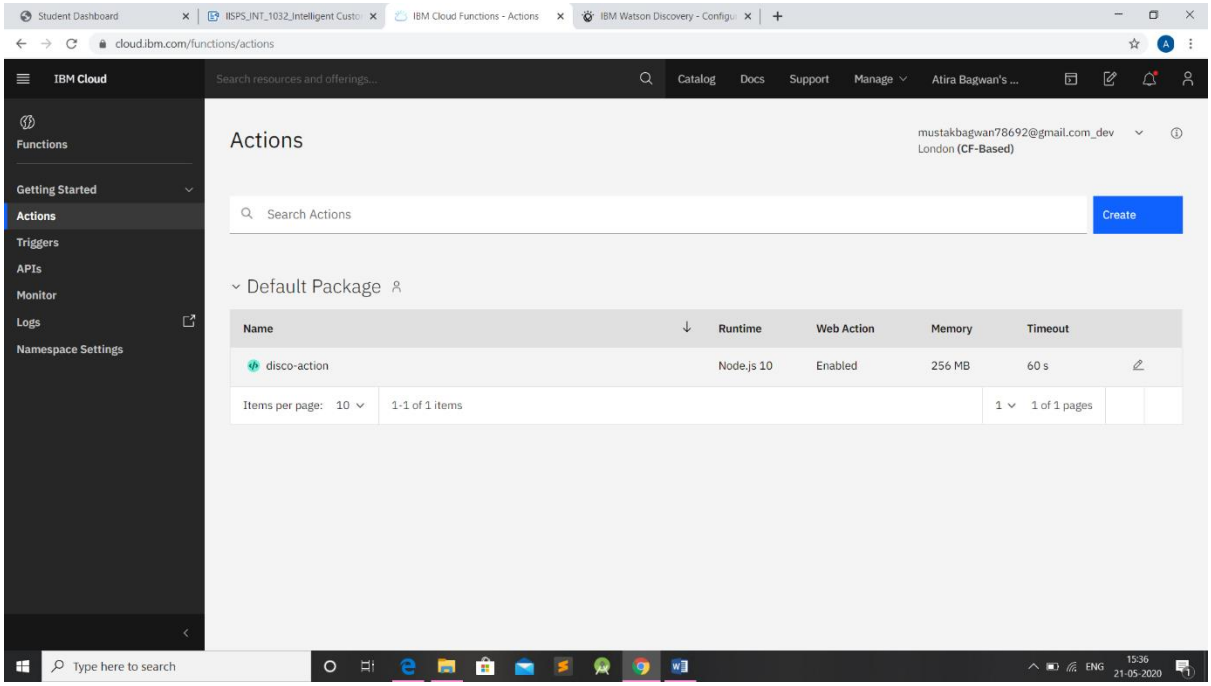
- Create new collection
- Cofigure data
- Annote with SDU
- Split document on subtitle field

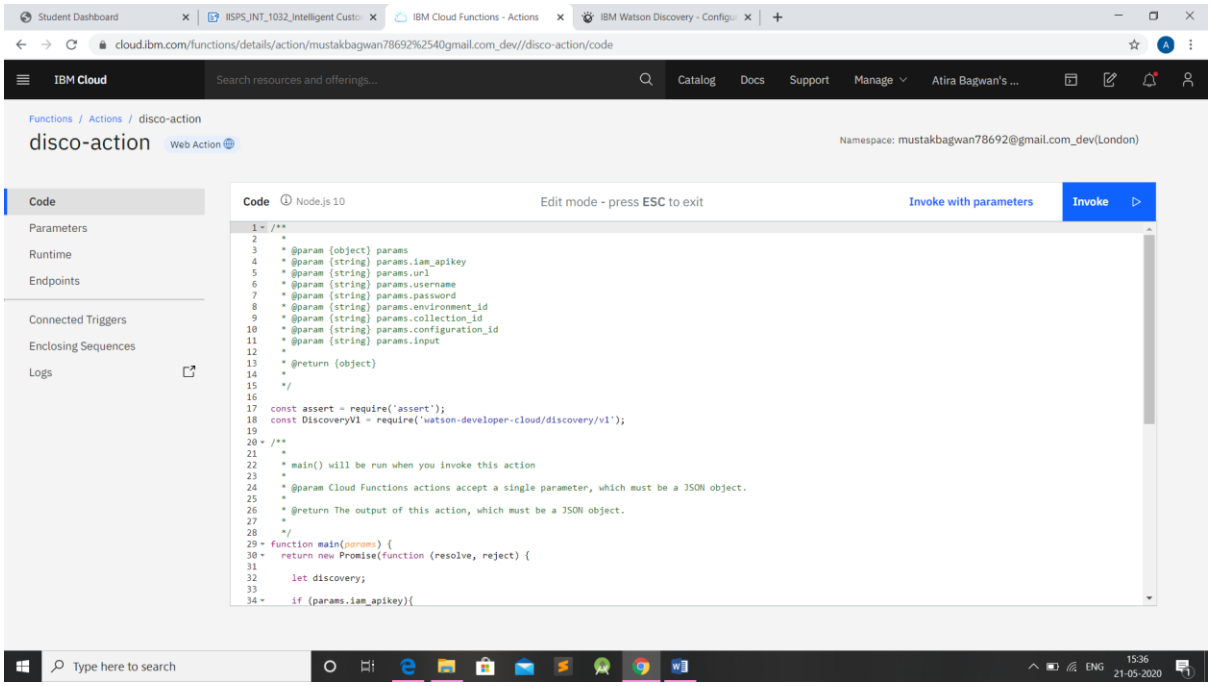




3.Create IBM Cloud Functions action

Create the web action that will make queries against our Discovery collection**.**





4.Configure Watson Assistant

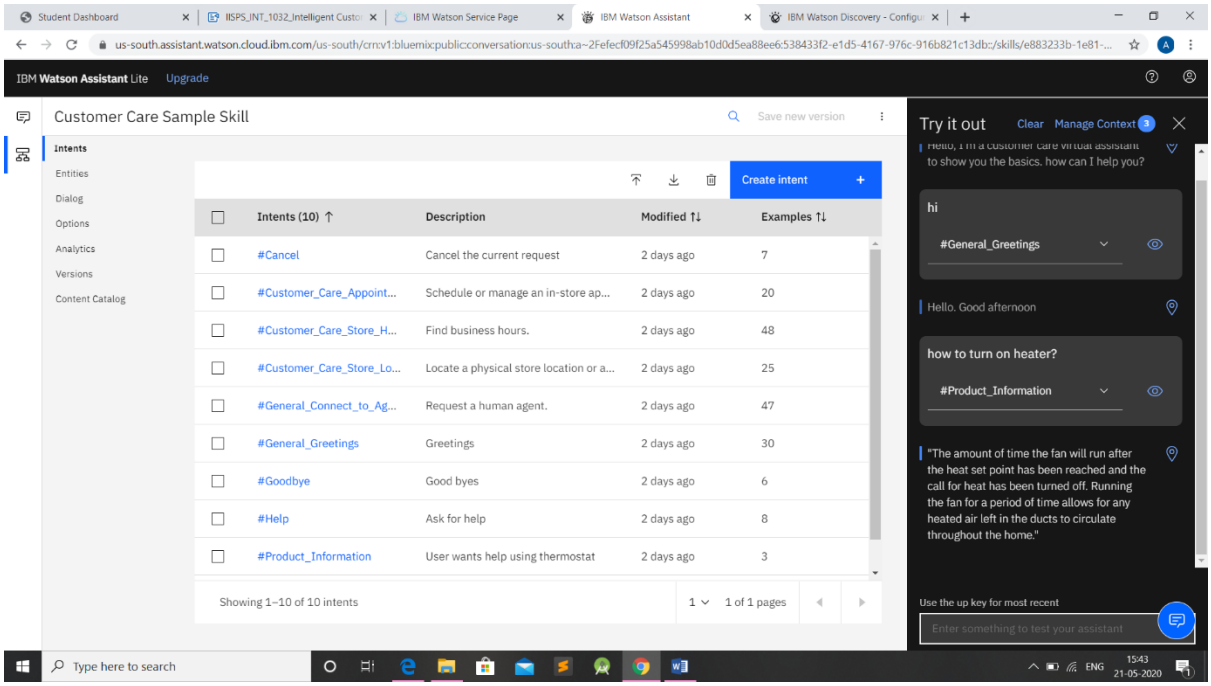
Launch the Watson Assistant tool and create a new dialog skill. Select the Use sample skill option as your starting point.This dialog skill contains all of the nodes needed to have a typical call center conversation with a user.

- Add new intent about product information
- Create new dialog about product information

Enable webhook from Assistant

Set up access to WebHook for the IBM Cloud Functions action created.

Test Assistant :

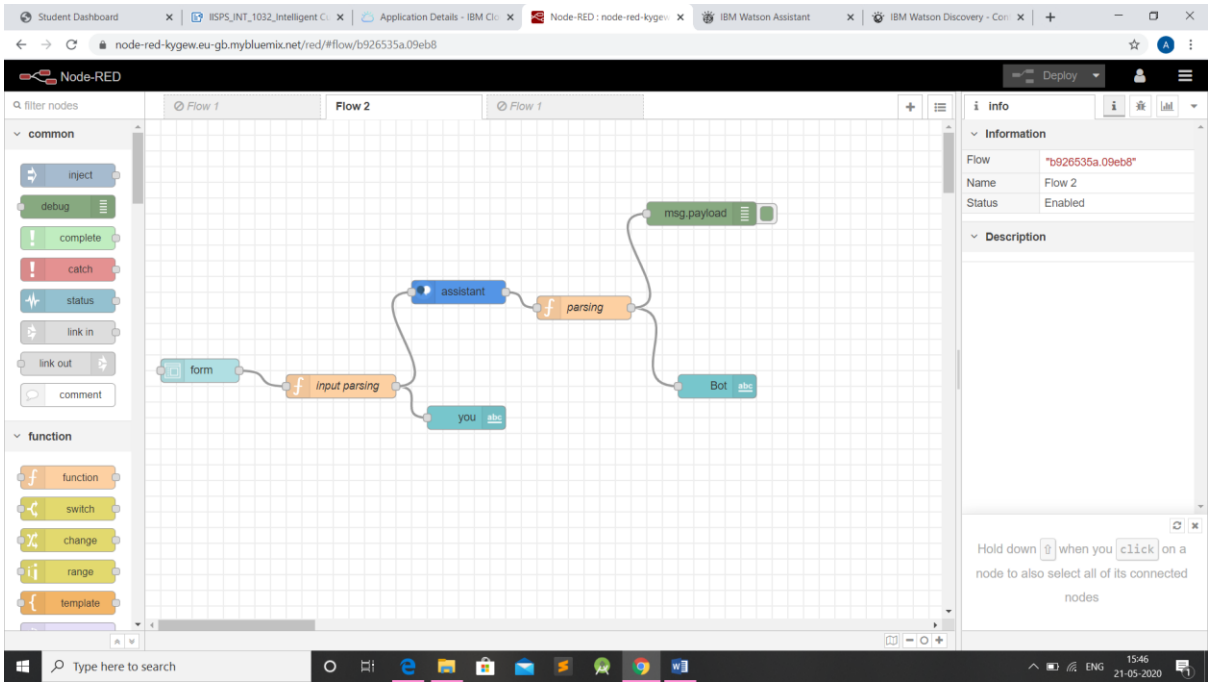


5.Create flow and configure node:

At first go to manage pallete and install dashboard.

Now,Create the flow with the help of following node:

- Inject
- Assistant
- Debug
- Function
- Ui_Form
- Ui_Text



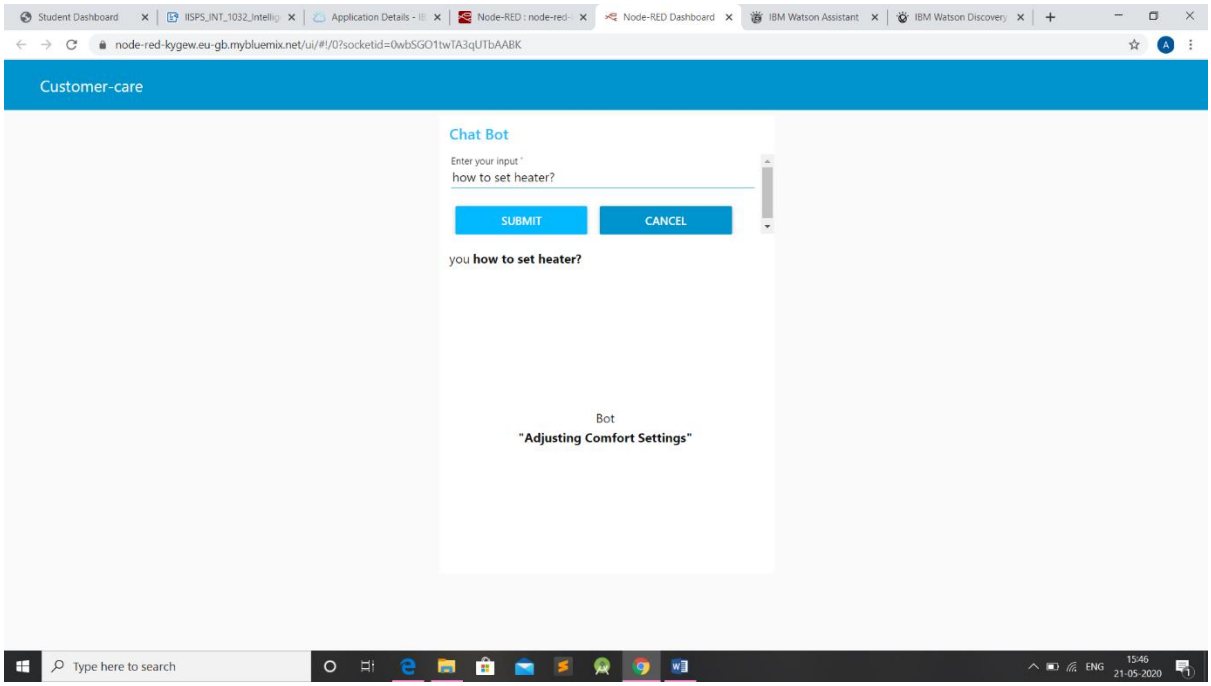
6.Deploy and run Node Red app.

Deploy the Node Red flow.

Then copy the link url upto .net/ and paste at anew tab by ui at the end of the url, like this,

https://node-red-kygew.eu-gb.mybluemix.net/ui

video link : https://drive.google.com/file/d/1H0INt-MJHLaorqp6QfV7zjitD4-raOui/view?usp=sharing


Student Dashboard
IISPS_INT_1032_Intellig
Application Details - IB
Node-RED : node-red-
Node-RED Dashboard
IBM Watson Assistant
IBM Watson Discovery
node-red-kygew.eu-gb.mybluemix.net/ui/#!/0?socketid=0wbSGO1twTA3qUTbAABK
Customer-care
Chat Bot
Enter your input *
how to set heater?
SUBMIT
CANCEL
you how to set heater?
Bot
"Adjusting Comfort Settings"
Type here to search
ENG
15:46
21-05-2020

Thank You!