







Heart disease prediction














Create Watson studio service and cloud storage object

 IBM Cloud

Search resources and products...










 Catalog Docs Support Manage ▾ Ranjani G's Account


   

Resource list

Create resource +

▼ Name	↑ Group	Location	Product	Status	Tags
 Filter by name or IP address...	Filter by group or org... ▾	Filter... ▾	 Filter...	 Filter...	Filter... ▾
^ Services and software (7)					
 KnowledgeCatalog	Default	Dallas	Watson Knowledge Catalog	✓ Active	1 ⋮ ^
 Watson Studio-xh	Default	Dallas	Watson Studio	✓ Active	— ⋮
 WatsonMachineLearning	Default	Dallas	Machine Learning	✓ Active	1 ⋮
 WatsonOpenScale	Default	Dallas	Watson OpenScale	✓ Active	1 ⋮
 node-red-fmene-2022--cloudant-...	Default	Dallas	Cloudant	✓ Active	— ⋮
^ Storage (1)					
 Cloud Object Storage-6o	Default	Global	Cloud Object Storage	✓ Active	— ⋮
▼ Network (0)					
▼ Functions namespaces (0)					
▼ Apps (5)					



Launch IBM cloudpak for data

IBM Cloud Pak for Data

Search in your workspaces

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RG

Welcome, Ranjani!

Take a tutorial

Step through implementing a Data fabric use case in a sample project.

→

Work with data

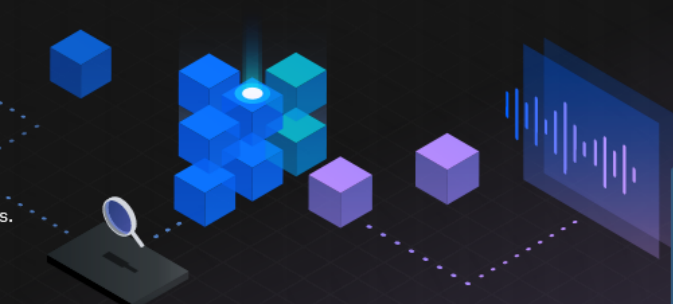
Create a project for your team to prepare data, find insights, or build models.

→

Learn what's new


Stay current with new features, enhancements, and other changes.


→




Feedback

Quick start

 Build dashboards
with IBM Cognos Dashboard Embedded

 Create data pipelines
with DataStage

 Build customer profiles
with IBM Match 360 with Watson

Projects

Heart disease prediction	Jul 27, 2022 04:33 PM
Crop Yield Estimation	Jul 22, 2022 07:38 PM

Catalogs

No catalogs

Your catalogs show here after you create or join them. Click New catalog to get started.

New catalog

Notifications

Online deployment ready

The online deployment [hdp_aai](#) in space [hdp_aai](#) is ready to accept requests

Jul 28, 2022 01:43 PM

View all

- Empty project->create
- Add asset->Automated Builder-> Auto AI
- Name of the Experiment -> associate ML service

The screenshot displays the IBM Cloud Pak for Data interface. At the top, the header includes the IBM Cloud Pak for Data logo, a search bar, and user account information (Ranjani G's Account, Dallas). The main navigation bar shows 'Projects / Heart disease prediction'. A modal dialog titled 'New asset' and 'Create an AutoAI experiment' is open. The dialog has a sidebar with a '+ New' button and a 'Gallery sample' option. The main content area is divided into three sections: 'Name' with a text input field containing 'Name'; 'Description (optional)' with a text area containing 'What's the purpose of this AutoAI experiment?'; and 'Tags (optional)' with a text input field containing 'Start typing to add tags'. On the right side of the dialog, there is a section for 'Watson Machine Learning Service Instance' with a dropdown menu showing 'WatsonMachineLearning'. Below this is the 'Environment definition' section, which shows '8 vCPU and 32 GB RAM' and a detailed note about capacity units per hour for training. At the bottom right of the dialog are 'Cancel' and 'Create' buttons.

IBM Cloud Pak for Data Search in your workspaces Buy ? ? ? ? Ranjani G's Account Dallas RG

Projects / Heart disease prediction

New asset
Create an AutoAI experiment

+ New
Gallery sample

Name
Name

Description (optional)
What's the purpose of this AutoAI experiment?

Tags (optional)
Add tags to make assets easier to find.
Start typing to add tags

Watson Machine Learning Service Instance
WatsonMachineLearning

Environment definition ⓘ
8 vCPU and 32 GB RAM

This environment definition consumes 20 capacity units per hour for training. The consumption rate differs for joining multiple data sources, depending on your configuration. For details, see [Watson Machine Learning plans](#).

Cancel Create

Add Data source

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Projects / Heart disease prediction

OverviewAssetsJobsManage

Find assets

Import asset

New asset

3 assets

All assets

Asset types


> Data 1

> Experiments 1

AutoAI experiments 1

> Models 1

Models

Name	Last modified
 hdp_aai - P3 XGB Classifier Model	18 hours ago Service

Items per page: 20 1-1 of 1 items 1 of 1 pages

Data in this project

Drop data files here or browse for files to upload

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Projects / Heart disease prediction / nnn

Configure AutoAI experiment

nnn



Add data sources

Drop or browse for one or more tabular data files. [Learn more.](#)

Browse or Select from project

Configure details:
Create time series-> No
What do you want to predict->Heart failure(drop down)
Regression->RMS

The screenshot displays the IBM Cloud Pak for Data interface. The top navigation bar includes the IBM Cloud Pak for Data logo, a search bar, and user account information (Ranjani G's Account, Dallas, RG). The main content area is divided into two panels: 'Add data sources' and 'Configure details'.








Add data sources: This panel shows a dashed box for dropping or browsing for one or more tabular data files. Below this, there are buttons for 'Browse' and 'Select from project'. A file named 'patientdataV6.csv' is listed with a size of 0.31 MB and 10 columns.

Configure details: This panel is titled 'Configure details' and contains the following sections:

- Create a time series forecast?** A section with a line graph icon and a text box asking to enable this option to predict future activity over a specified date/time range. Data must be structured and sequential. There are 'Yes' and 'No' buttons.
- What do you want to predict?** A section with a lightbulb icon and a text box asking to enable this option to predict future activity over a specified date/time range. Data must be structured and sequential. There are 'Yes' and 'No' buttons.
- Prediction column:** A dropdown menu showing 'HEARTFAILURE'.
- Prediction type:** A dropdown menu showing 'Binary Classification'.
- Positive class:** A dropdown menu showing 'Y'.
- Optimized for:** A dropdown menu showing 'Accuracy & run time'.
- CUH remaining:** A text box showing '12.42 CUH'.
- Experiment settings:** A section with a gear icon and a 'Run experiment' button.


The interface also shows a breadcrumb trail: 'Projects / Heart disease prediction / nnn'. The status bar at the bottom indicates 'Autosaved: 10:05:43 am'.


Experiment settings

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Experiment settings

Prediction column
HEARTFAILURE (STR)

Data source
patientdataV6.csv 




Prediction
Data source
Runtime

Prediction settings

General **Fairness** **Time series**

Prediction type

Change the prediction type based on data in the prediction column. Changing the type changes other prediction settings.

Binary classification 
Classify data into categories.
Choose this if your prediction column contains two distinct categories.

Multiclass classification
Classify data into categories. Choose this if your prediction column contains multiple distinct categories.

Regression
Predict values from a continuous set of values. Choose this if your prediction column contains a large number of values.

Time series forecast
Forecast future values in a series. Data must be structured and sequential. [Learn more](#)

Cancel Save settings

Relationship map ⓘ

Prediction column: HEARTFAILURE



Progress map

Swap view ↔

A diagram showing a sequence of steps in a workflow. The steps are represented by circles connected by lines. The final step is highlighted with a larger circle and a checkmark.

Pending

PATIENTDATAV6.CSV

Starting the AutoAI experiment

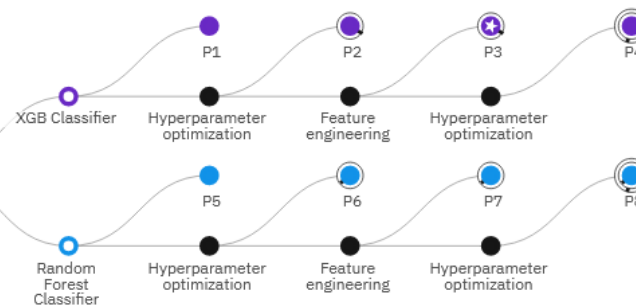
Time elapsed: 22 seconds

View log

Save code

★ Rank by: Accuracy (Optimized) | Cross validation score

Model selection

Swap view \rightleftarrows 

8 PIPELINES GENERATED

Time elapsed: 5 minutes

[Save code](#)

Hover on the model and click save as model name(do not change)->create

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Projects / Heart disease prediction / hdp_aai

Experiment summary

Pipeline comparison

★ Rank by: Accuracy (Optimized) | Cross validation score

Pipeline leaderboard

	Rank	↑	Name	Algorithm	Accuracy (Optimized) Cross Validation	Enhancements	Build time
★	1		Pipeline 3	XGB Classifier	0.873	HPO-1 FE	00:00:46
	2		Pipeline 4	XGB Classifier	0.873	HPO-1 FE HPO-2	00:01:41
	3		Pipeline 1	XGB Classifier	0.869	None	00:00:01
	4		Pipeline 2	XGB Classifier	0.869	HPO-1	00:00:14
	5		Pipeline 8	Random Forest Classifier	0.862	HPO-1 FE HPO-2	00:01:42
	6		Pipeline 5	Random Forest Classifier	0.862	HPO-1 FE	00:00:54

view in project->

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Projects / Heart disease prediction / hdp_aai

Experiment summary		Pipeline comparison		★ Rank by: A		
★	1	Pipeline 3	<div>XGB Classifier</div>	0.873	<div>HPO-1</div> <div>FE</div>	00:00:00
	2	Pipeline 4	<div>XGB Classifier</div>	0.873	<div>HPO-1</div> <div>FE</div> <div>HPO-2</div>	00:00:00
	3	Pipeline 1	<div>XGB Classifier</div>	0.869	None	00:00:01
	4	Pipeline 2	<div>XGB Classifier</div>	0.869	<div>HPO-1</div>	00:00:14
	5	Pipeline 8	<div>Random Forest Classifier</div>	0.862	<div>HPO-1</div> <div>FE</div> <div>HPO-2</div>	00:01:42
	6	Pipeline 7	<div>Random Forest Classifier</div>	0.862	<div>HPO-1</div> <div>FE</div>	00:00:51
	7	Pipeline 5	<div>Random Forest Classifier</div>	0.858	None	00:00:01
	8	Pipeline 6	<div>Random Forest Classifier</div>	0.858	<div>HPO-1</div>	00:00:13

✔ Saved model successfully.
hdp_aai - P4 XGB Classifier was successfully saved to Heart disease prediction.
[View in project](#)

Feedback

Promote to deploy->name->select ML
services->create
“The space is created”
close->promote

IBM Cloud Pak for Data

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Projects / Heart disease prediction / hdp_aai - P3 XGB Classifier

hdp_aai - P3 XGB Classifier

Promote to deployment space

Track this model

The model will be added to your model inventory for activity tracking and model comparison.

Model tracking available

Track this model

Model inventory

Model entry	Track this model
Model entry status	Track this model

Model information

Model description	Description not added
-------------------	-----------------------

hdp_aai - P3 XGB Classifier

Last modified at Aug 5, 2022 10:26 AM

Description

No description provided.

Created

Jul 28, 2022 1:38 PM

Type

wml-hybrid_0.1

Model ID

961742d4-7516-4c90-b747-41...

Software specification

hybrid_0.1


Hybrid pipeline software specifications

autoai-kb_rt22.1-py3.9




Tags

Add tags to make assets easier to find.

3 assets

 All assets

Asset types

>  Data	1
>  Experiments	1
✓  Models	1
Models	1

Model created under
project
deployment space link->
hover on to model
deploy->
create deployment->
online->any name->create
**deployment tab shows
status deployed**

Overview

Assets

Jobs

Manage

Assets

hdp_aai - P3 XGB Classifier

6 minutes ago by Service

hdp_aai

21 hours ago by Ranjani G (Y)

View all

Resource usage

For this month in this project

0 CUH

Project history

Asset promoted to space

You promoted hdp_aai - P3 XGB Classifier from project [Heart disease prediction](#) to space [hdp_aai](#).

Jul 28, 2022 01:41 PM

Readme

Type project notes, reminders, or instructions

Data in this project

Drop data files here or browse for files to upload

hdp_aai

Overview

Assets

Deployments

Jobs

Manage

What deployments are you looking for?





Deployments (1)

Name	Type	Status	Asset	Tags	Last modified
hdp_aai	Online	Deployed	hdp_aai - P3 XGB Classifier		Jul 28, 2022 1:42 PM

Drop files here or browse for files to upload.

Stay on the page until upload completes.
Incomplete uploads are cancelled.

Click on to the model copy the endpoint url and save it

 IBM Cloud Pak for Data  Search in your workspaces Buy  

[Deployments](#) / [hdp_aai](#) / [hdp_aai - P3 XGB Classifier](#) /

hdp_aai

✓ Deployed Online


API reference


Test

Deployment details

Direct link

Endpoint

`https://us-south.ml.cloud.ibm.com/ml/v4/deployments/eb4533ba-ed27-4bab-b932-15b20de84423` 


Bearer <token> 
IAM

Code snippets

cURL	Java	JavaScript	Python	Scala
------	------	------------	--------	-------

NOTE: you must set \$API_KEY below using information retrieved from your IBM Cloud account.

```
curl --insecure -X POST --header "Content-Type: application/x-www-form-urlencoded" --header "Accept: application/json"
--data-urlencode "grant_type=urn:ibm:params:oauth:grant-type:apikey"
--data-urlencode "apikey=$API_KEY" "https://iam.cloud.ibm.com/identity/token"
```



Go to test tab
enter input and check prediction

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RG

[Deployments](#) / [hdp_aai](#) / [hdp_aai - P3 XGB Classifier](#) /

hdp_aai ✔ Deployed Online

API reference
Test
Deployment details

Enter input data

Input
Paste JSON

Enter data manually or use a CSV file to populate the spreadsheet. Max file size is 50 MB.

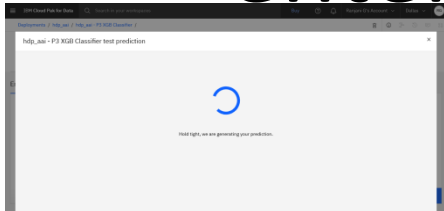
[Download CSV template](#) ⬇️
 [Browse local files](#) ➔
 [Search in space](#) ➔

[Clear all](#) ✕

	AVGHEARTBEATS...	PALPITATIONSPE...	CHOLESTEROL (in...	BMI (integer)	AGE (integer)	SEX (other)	FAMILYHISTORY (...	SMOKERLAST5YR...	EXERCISEMINPE...
1	52	25	5	256	45	F	N	N	5
2									
3									

Predict

Go to test tab enter input and check prediction



IBM Cloud Pak for Data Search in your workspaces Buy ? Bell Ranjani G's Account Dallas RG

Deployments / hdp_aai / hdp_aai - P3 XGB Classifier /

hdp_aai - P3 XGB Classifier test prediction

Prediction type

Binary classification

Prediction percentage

1 Record

Confidence level distribution

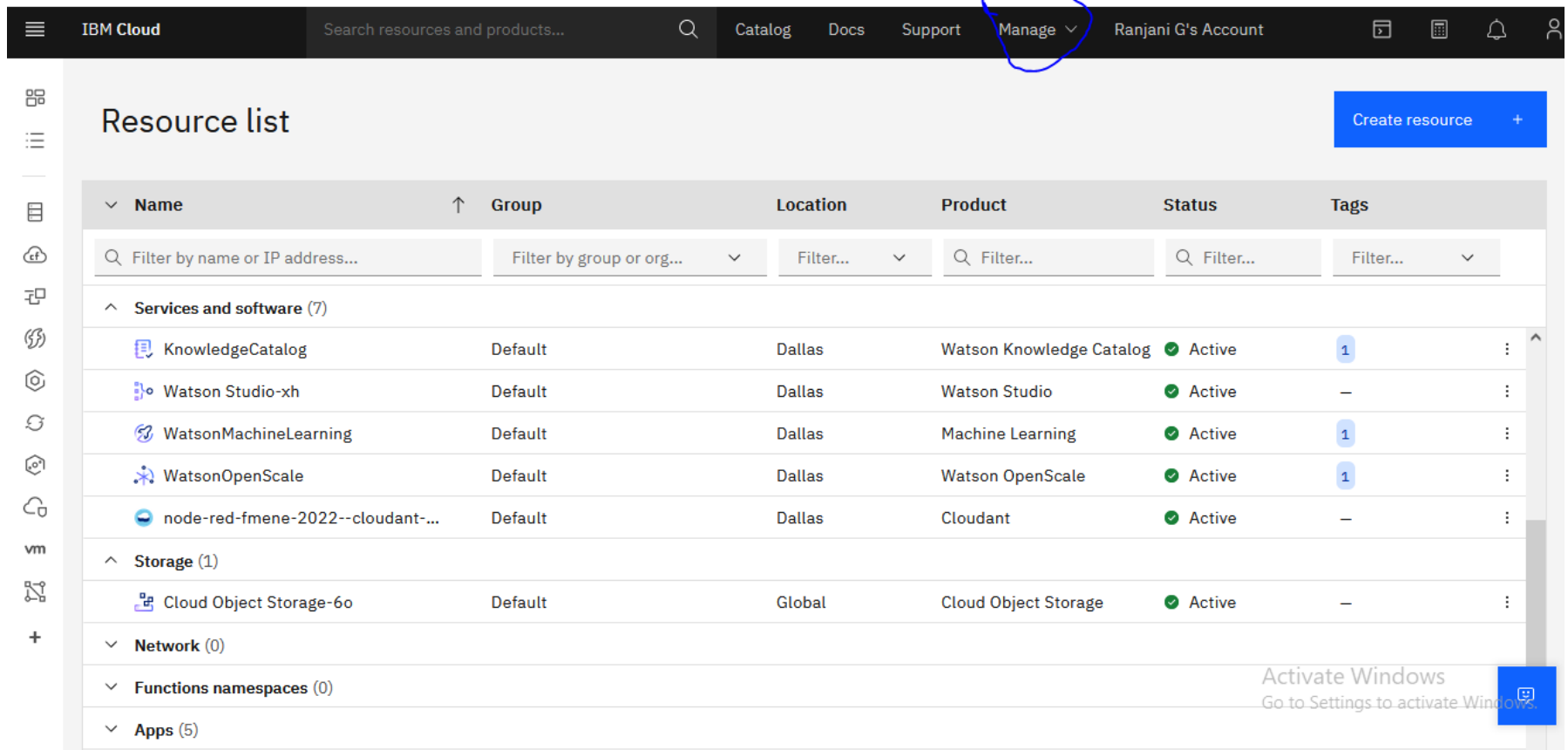
Table view ☒ JSON view

```
{
  "fields": [
    "prediction",
    "probability"
  ],
  "values": [
    [
      "N",
      [
        0.9771174192428589,
        0.02288259007036686
      ]
    ]
  ]
}
```

Download

Manage->access->IAM

left tab-APIkeys



IBM Cloud

Search resources and products...

Catalog Docs Support **Manage** Ranjani G's Account

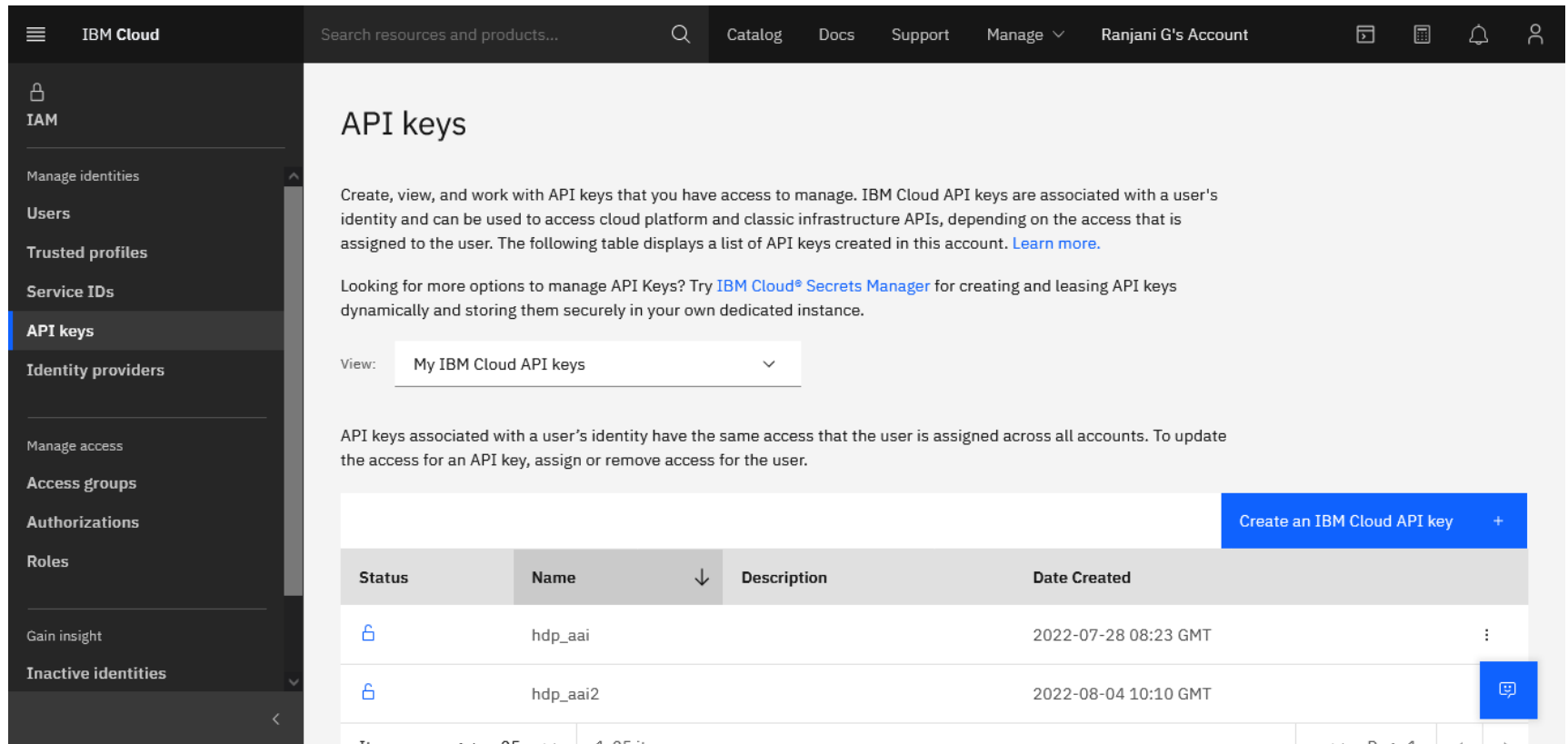
Resource list

Create resource +

Name	Group	Location	Product	Status	Tags
Filter by name or IP address... Filter by group or org... Filter... Filter... Filter... Filter...					
Services and software (7)					
KnowledgeCatalog	Default	Dallas	Watson Knowledge Catalog	Active	1
Watson Studio-xh	Default	Dallas	Watson Studio	Active	—
WatsonMachineLearning	Default	Dallas	Machine Learning	Active	1
WatsonOpenScale	Default	Dallas	Watson OpenScale	Active	1
node-red-fmene-2022--cloudant-...	Default	Dallas	Cloudant	Active	—
Storage (1)					
Cloud Object Storage-6o	Default	Global	Cloud Object Storage	Active	—
Network (0)					
Functions namespaces (0)					
Apps (5)					

Activate Windows
Go to Settings to activate Windows.

Create new API key and save it in notepad



IBM Cloud

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IAM

- Manage identities
- Users
- Trusted profiles
- Service IDs
- API keys**
- Identity providers
- Manage access
- Access groups
- Authorizations
- Roles
- Gain insight
- Inactive identities

API keys



Create, view, and work with API keys that you have access to manage. IBM Cloud API keys are associated with a user's identity and can be used to access cloud platform and classic infrastructure APIs, depending on the access that is assigned to the user. The following table displays a list of API keys created in this account. [Learn more.](#)

Looking for more options to manage API Keys? Try [IBM Cloud® Secrets Manager](#) for creating and leasing API keys dynamically and storing them securely in your own dedicated instance.

View: My IBM Cloud API keys ▾

API keys associated with a user's identity have the same access that the user is assigned across all accounts. To update the access for an API key, assign or remove access for the user.

Create an IBM Cloud API key +

Status	Name ▾	Description	Date Created
	hdp_aai		2022-07-28 08:23 GMT
	hdp_aai2		2022-08-04 10:10 GMT

Items per page: 25 ▾ 1-25 items Page 1 of 1

Service details->Manage->account->cloud
foundry orgs->create
region and other details will be auto populated

The screenshot displays the IBM Cloud Account management interface. The top navigation bar includes the IBM Cloud logo, a search bar, and links to Catalog, Docs, Support, and Manage. The user's account name, Ranjani G's Account, is shown on the right. The left sidebar lists various account management options, with 'Account' currently selected. The main content area, titled 'Account', features five tiles: 'Account settings' (with a gear icon), 'Resource groups' (with a group icon), 'Cloud Foundry orgs' (with a gear icon), 'Licenses and entitlements' (with a document icon), and 'Tags' (with a tag icon). Each tile provides a brief description of its function. A blue chat button is located in the bottom right corner.

IBM Cloud

Search resources and products...


Catalog Docs Support Manage ▾ Ranjani G's Account

Account

Account resources


- Resource groups
- Cloud Foundry orgs
- Licenses and entitlements
- Tags
- Dashboards
- Account settings
- IBM Cloud Shell settings
- Notification distribution list
- Classic infrastructure
- Subscriptions
- Audit log
- Company information

Account




Account settings

Upgrade your account, activate special features, and redeem discounts.




Resource groups

Group your resources so you can quickly assign users access to multiple resources at a time. Resource groups are available for all resources that are managed by IBM Cloud Identity and Access Management.




Cloud Foundry orgs

Adjust resource quotas, users, spaces, and custom domains.



Licenses and entitlements

Assign licenses to your account for account members to use when installing software.

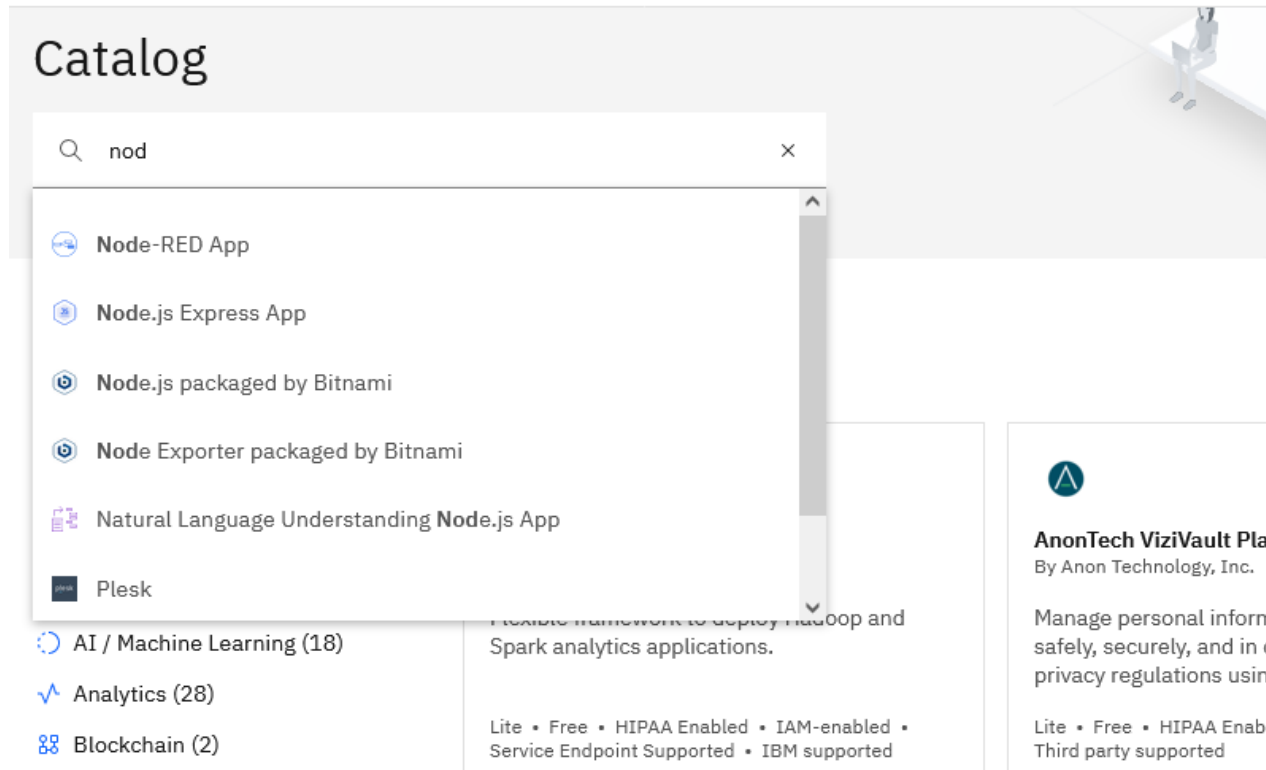


Tags

Use tags to manage your resources.

Chat

Add Node Red services catalog->node red APP->create



The screenshot displays a web-based service catalog. At the top left, the word "Catalog" is visible. A search bar contains the text "nod". Below the search bar, a list of search results is shown, each with a small icon and a text label:

- Node-RED App
- Node.js Express App
- Node.js packaged by Bitnami
- Node Exporter packaged by Bitnami
- Natural Language Understanding Node.js App
- Plesk

Below the search results, there are three main content areas. The left area shows category filters: "AI / Machine Learning (18)", "Analytics (28)", and "Blockchain (2)". The middle area shows a description of a service: "Flexible framework to deploy Hadoop and Spark analytics applications." followed by a list of features: "Lite • Free • HIPAA Enabled • IAM-enabled • Service Endpoint Supported • IBM supported". The right area shows a service card for "AnonTech ViziVault Platform" by Anon Technology, Inc., with a description: "Manage personal information safely, securely, and in compliance with privacy regulations using" and a list of features: "Lite • Free • HIPAA Enabled • Third party supported".

About

Create

App details

App name

Node RED SBMOR 2022-08-05

Accept the default name, or enter a value between 2 and 128 characters.

Resource group

Default

Tags 

Examples: env:dev, version-1

Platform

☒ Node.js

ASK A QUESTION

Service details

Cloudant★

★ = You have existing instances of this service available to use in this kit. If you wish to use the existing service, select it from the pricing plan menu.

Region

London

Resource group

Default

Warning


Only one instance of a Lite plan per service is allowed. To create a new service instance, either delete your existing Lite plan service instance, or select a paid plan before continuing. You can also use your existing Lite plan service instance with the application.



Pricing plan

Lite



[Pricing details](#) [Terms](#) 

Cancel

Create

ASK A QUESTION



Click on Get started

Default name-App

click on create

Click on deploy APP

(default kubernetes) so choose cloud foundry

ensure the state name is same throuhout

Make sure host is created

next->create

Build starts->status should change from not found to success

you can find the APP in dashboard under cloud foundry apps

Go to resource list and click on node red app

IBM Cloud

Search resources and products...

Q

Catalog

Docs

Support

Manage

Ranjani G's Account

Resource list

Create resource +

Name	Group	Location	Product	Status	Tags
Filter by name or IP address...	Filter by group or org...	Filter...	Filter...	Filter...	Filter...
Devices (0)					
VPC infrastructure (0)					
Clusters (0)					
Container Registry (0)					
Satellite (0)					
Cloud Foundry apps (1)					
Node RED FMENE 2022-07-28	rvrvc / hdp_aai	Dallas	Node.js	Started	
Cloud Foundry services (1)					
Services and software (7)					
Continuous Delivery	Default	Dallas	Continuous Delivery	Active	
IBM Cognos Dashboard Embedded...	Default	Dallas	IBM Cognos Dashboard E...	Active	1

Click on App
visit APP url
check all the boxes and finish

IBM Cloud

Search resources and products...

Catalog

Docs

Support

Manage

Ranjani G's Account

Resource list /

Node RED FMENE 2022-07-28 Running [Visit App URL](#) [Add tags](#) [Details](#) [Actions...](#)

Getting started

Overview

Runtime

Connections

Logs

IBM Cloud Foundry Public is being deprecated. Please see [full details](#).

Instances

Health

Instances

Runtime

Node.js

Node-RED on IBM Cloud

Node-RED

Flow-based programming for the Internet of Things

Node-RED is a programming tool for wiring together hardware devices, APIs and online services in new and interesting ways.

This instance is running as an IBM Cloud application, giving it access to the wide range of services available on the platform.

More information about Node-RED, including documentation, can be found at [nodered.org](#).

Go to your Node-RED flow editor

[Learn how to customise Node-RED](#)

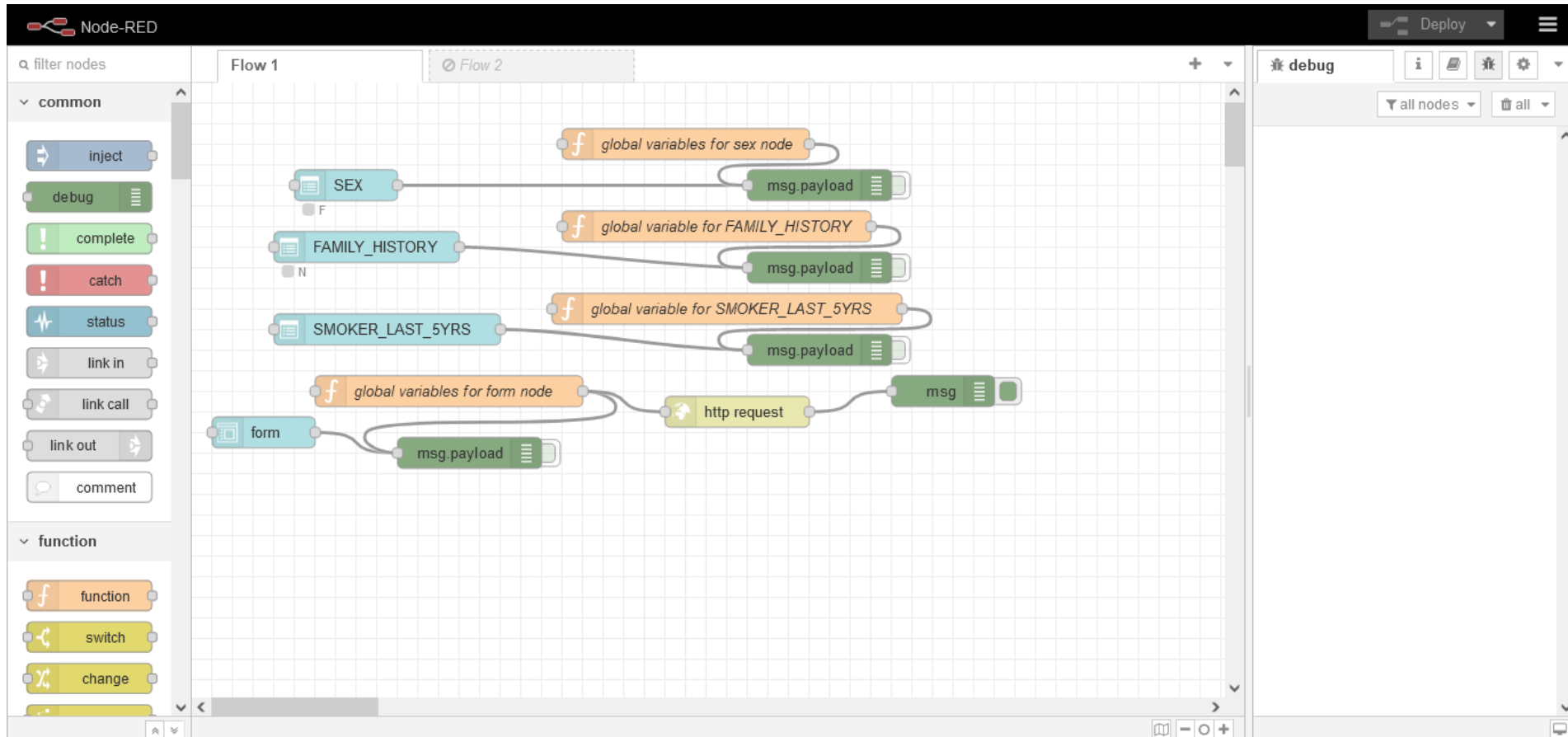
Dash board node-blue

Form node

Drop down node

Debug node-green

Function node-orange



Form node settings

Node-RED

filter nodes

speech custom builder

tone analyzer v3

dashboard

button

dropdown

switch

slider

numeric

text input

date picker

colour picker

form

text

audio

Enabled

Deploy

debug

all nodes

all

Edit form node

Delete Cancel Done

Properties

Group: [Heart disease predictor] Enter the values

Size: auto

Label: optional label

Form elements

Label	Name	Type	Required	UiRows	Remove
HEARTBEAT_COU	HEARTBEAT_COU	Number	<input checked="" type="checkbox"/>		
PALPITATIONS	PALPITATIONS	Number	<input checked="" type="checkbox"/>		
BMI	BMI	Number	<input checked="" type="checkbox"/>		
EXERCISE_TIME	EXERCISE_TIME	Number	<input checked="" type="checkbox"/>		

element

Form node settings

The screenshot displays the Node-RED 'Edit form node' configuration window. The interface is divided into several sections:

- Left Panel:** A sidebar with a search bar 'filter nodes' and a list of nodes including 'speech custom builder', 'tone analyzer v3', and a 'dashboard' category containing 'button', 'dropdown', 'switch', 'slider', 'numeric', 'text input', 'date picker', 'colour picker', 'form', 'text', and 'gauge'.
- Header:** The title 'Edit form node' is at the top left, with 'Delete', 'Cancel', and 'Done' buttons on the right.
- Properties Section:** A scrollable list of form elements. Each element has a collapse icon, a label, a value field, a type dropdown (all set to 'Number'), a toggle switch (all turned on), and a delete icon.

Label	Value	Type	Toggle
HEARTBEAT_COU	HEARTBEAT_COU	Number	On
PALPITATIONS	PALPITATIONS	Number	On
BMI	BMI	Number	On
EXERCISE_TIME	EXERCISE_TIME	Number	On
- Buttons:** A section with a 'submit' button and a 'cancel' button.
- Layout:** A checkbox labeled 'Place the form elements in two columns' is currently unchecked.
- Topic:** A dropdown menu set to 'msg. topic'.
- Class:** A text field with the placeholder 'Optional CSS class name(s) for widget'.
- Name:** A text field with the placeholder 'Name'.
- Footer:** A radio button labeled 'Enabled' is selected.
- Right Panel:** A 'debug' console with icons for info, logs, error, and settings, and a dropdown for 'all nodes'.

Drop down node settings

The screenshot displays the Node-RED web interface. On the left, the 'filter nodes' sidebar shows a list of nodes including 'speech custom builder', 'tone analyzer v3', and a 'dashboard' section with various input and output nodes like 'button', 'dropdown', 'switch', 'slider', 'numeric', 'text input', 'date picker', 'colour picker', 'form', 'text', and 'audio'. The main workspace shows 'Flow 1' with a sequence of nodes: a 'SEX' dropdown node, followed by 'FAMILY_HISTORY', 'SMOKER_LAST_5YRS', a 'global variables for form node' function node, a 'form' node, and a 'msg.payload' output node. The 'Edit dropdown node' settings panel is open on the right, showing the following configuration:

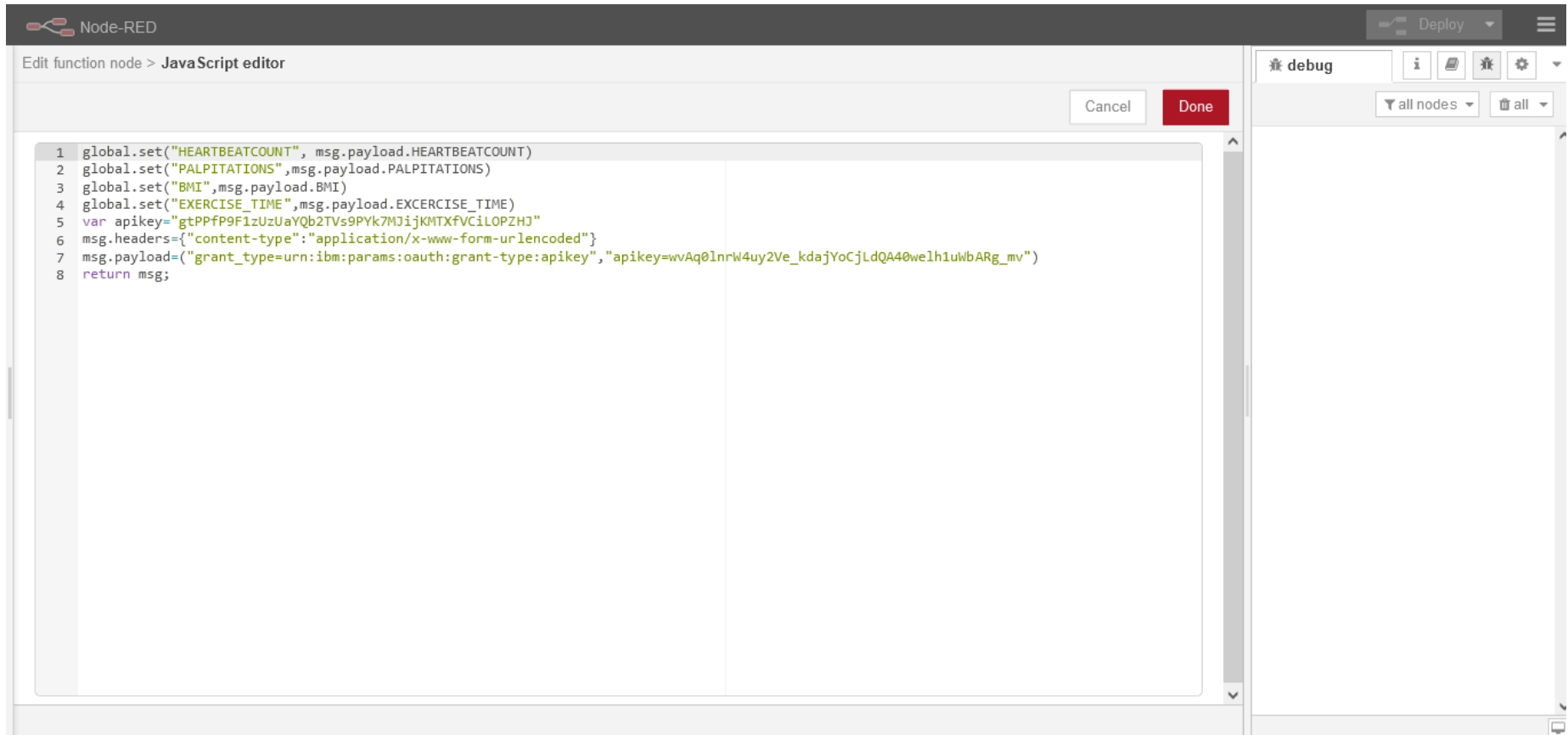
- Delete**: Button
- Cancel**: Button
- Done**: Button
- Properties**: Tab
- Group**: [Heart disease predictor] Enter the values
- Size**: auto
- Label**: SEX
- Tooltip**: optional tooltip
- Placeholder**: SEX
- Options**:
 - M Male
 - F Female
- Enabled**: Radio button

The rightmost sidebar contains a 'debug' tab and a list of nodes.

To visualize the created dashboard

The screenshot displays the Node-RED web interface. The top bar includes the Node-RED logo, a search bar for nodes, and a 'Deploy' button. The left sidebar shows a 'filter nodes' search bar and a 'dashboard' section with various UI components like buttons, dropdowns, switches, sliders, and a form. The main workspace, titled 'Flow 1', contains a flow diagram. It starts with a 'form' node, followed by a 'msg.payload' node, then a 'global variables for form node' function node. This is followed by three parallel branches, each consisting of a variable node (SEX, FAMILY_HISTORY, and SMOKER_LAST_5YRS), a corresponding 'global variable' function node, and a 'msg.payload' node. These branches converge into a single 'http request' node, which is connected to a 'msg' node. The right sidebar shows a 'debug' tab with a dropdown menu containing options like Information, Help, Debug messages, Configuration nodes, Context Data, and Dashboard. Below the main workspace, a blue banner reads 'Heart disease predictor'. Underneath this banner is a form titled 'Enter the values' with input fields for SEX (set to Female), FAMILY_HISTORY (set to No), SMOKER_LAST_5YRS (set to Yes), HEARTBEAT_COUNT, PALPITATIONS, BMI, and EXERCISE_TIME. At the bottom of the form are 'SUBMIT' and 'CANCEL' buttons.

Global variable for Form nodes



The screenshot shows the Node-RED JavaScript editor interface. The title bar indicates "Node-RED" and "Edit function node > JavaScript editor". The main editor area contains the following JavaScript code:

```
1 global.set("HEARTBEATCOUNT", msg.payload.HEARTBEATCOUNT)
2 global.set("PALPITATIONS", msg.payload.PALPITATIONS)
3 global.set("BMI", msg.payload.BMI)
4 global.set("EXERCISE_TIME", msg.payload.EXERCISE_TIME)
5 var apikey="gtPPfP9F1zUzUaYQb2TVs9PYk7MJiJKMTXfVCiLOPZHJ"
6 msg.headers={"content-type":"application/x-www-form-urlencoded"}
7 msg.payload={"grant_type=urn:ibm:params:oauth:grant-type:apikey","apikey=vvAq0lnrW4uy2Ve_kdajYoCjLdQA40welh1uWbARg_mv"}
8 return msg;
```

On the right side, there is a "debug" panel with icons for information, clipboard, search, and settings. Below these icons are dropdown menus for "all nodes" and "all".

Global variable for Drop down nodes

The screenshot displays the Node-RED web interface. On the left, the 'Node palette' shows various nodes, including 'form' and 'dropdown'. The main workspace shows 'Flow 1' with a sequence of nodes: 'SEX' (a dropdown node), 'FAMILY_HISTORY', 'SMOKER_LAST_5YRS', and a 'form' node. The 'form' node is connected to a 'msg.payload' node. A function node, labeled 'global variables for form node', is positioned between the 'form' node and the 'SEX' node. The 'Edit function node' dialog is open, showing the function code:

```
1 global.set("SEX",msg.payload)
2 return msg;
```

The dialog also shows the 'Name' field set to 'global variables for sex node' and the 'On Message' tab selected. The 'Enabled' checkbox is checked.

http request node setting

This should give you the access token

The screenshot displays the Node-RED web interface. On the left, a sidebar contains a 'filter nodes' search bar and a 'dashboard' section with various widgets like 'button', 'dropdown', 'switch', 'slider', 'numeric', 'text input', 'date picker', 'colour picker', 'form', 'text', and 'gauge'. The main workspace shows 'Flow 1' with a sequence of nodes: a 'form' node, followed by three 'global variables for form node' functions, and an 'http request' node. The 'http request' node is selected, and its configuration panel is open on the right. The panel has tabs for 'Delete', 'Cancel', and 'Done'. The 'Properties' tab is active, showing the following settings:

- Method: POST
- URL: `https://iam.cloud.ibm.com/identity/token`
- ☐ Enable secure (SSL/TLS) connection
- ☐ Use authentication
- ☐ Enable connection keep-alive
- ☐ Use proxy
- ☒ Only send non-2xx responses to Catch node
- Return: a parsed JSON object
- Name: Name

A tip box at the bottom of the configuration panel states: 'Tip: If the JSON parse fails the fetched string is returned as-is.' At the very bottom of the panel, there is an 'Enabled' checkbox.