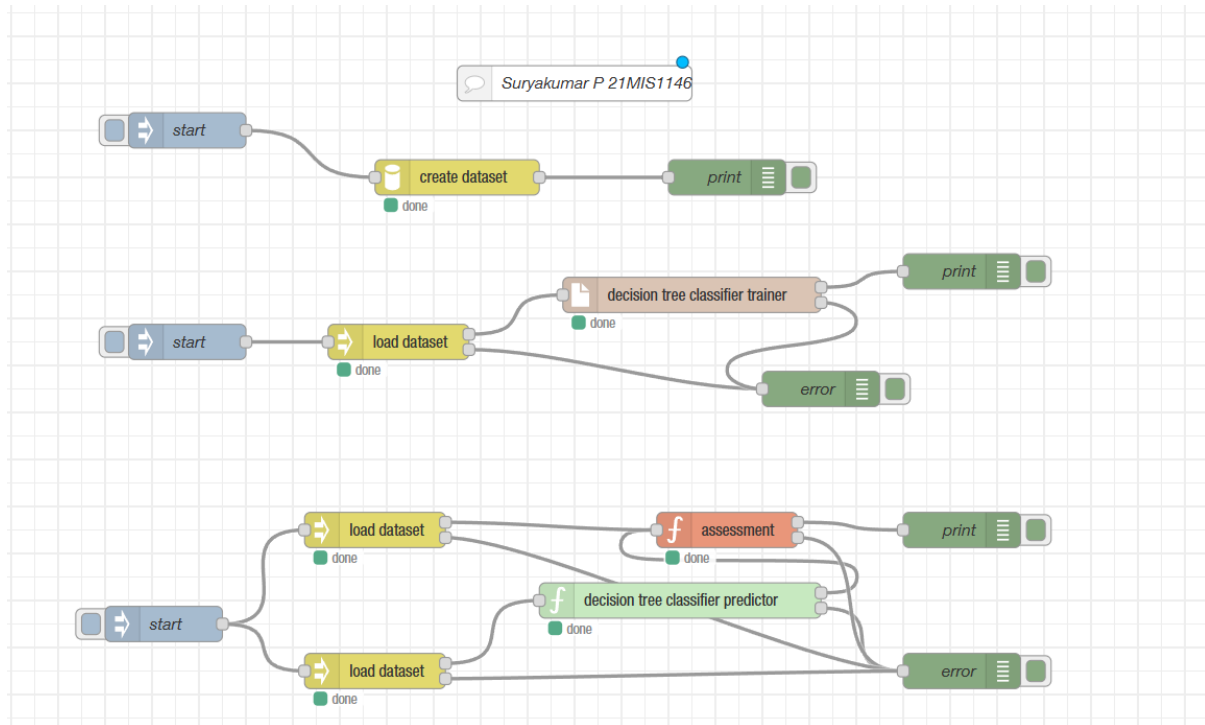


IoT Challenging Task 4

Suryakumar P 21MIS1146

Flow:



Full JSON Code:

```
[  
  {  
    "id": "47a34765e588b147",  
    "type": "tab",  
    "label": "Flow 2",  
    "disabled": false,  
    "info": "",  
    "env": []  
  },  
  {  
    "id": "8e4e9ed52cfeebf5",
```

```
"type": "create dataset",
"z": "47a34765e588b147",
"name": "",
"path": "D:\\VIT\\Academics\\Winter Semester 24-25\\ECE3502-
IoT_Domain_Analyst\\Lab\\dataset\\Iris.csv",
"saveFolder": "D:\\VIT\\Academics\\Winter Semester 24-25\\ECE3502-
IoT_Domain_Analyst\\Lab\\dataset\\Train",
"saveName": "Iris",
"input": "0,1,2,3",
"output": "4",
"trainingPartition": "",
"shuffle": true,
"seed": "",
"x": 500,
"y": 160,
"wires": [
  [
    "1e16c409dc89bdc3"
  ]
]
},
{
  "id": "cb118b8ef4281797",
  "type": "inject",
  "z": "47a34765e588b147",
  "name": "start",
  "props": [
    {
      "p": "payload",
```

```
    "v": "",
    "vt": "date"
  },
  {
    "p": "topic",
    "v": "",
    "vt": "str"
  }
],
"repeat": "",
"crontab": "",
"once": false,
"onceDelay": 0.1,
"topic": "",
"payload": "",
"payloadType": "date",
"x": 270,
"y": 120,
"wires": [
  [
    "8e4e9ed52cfeebf5"
  ]
]
},
{
  "id": "1e16c409dc89bdc3",
  "type": "debug",
  "z": "47a34765e588b147",
```

```
"name": "print",
"active": true,
"tosidebar": true,
"console": false,
"tostatus": false,
"complete": "payload",
"x": 730,
"y": 160,
"wires": []
},
{
  "id": "86b689b18fcb0f21",
  "type": "load dataset",
  "z": "47a34765e588b147",
  "name": "",
  "datasetFolder": "D:\\VIT\\Academics\\Winter Semester 24-25\\ECE3502-
IoT_Domain_Analyst\\Lab\\dataset\\Train",
  "datasetName": "Iris",
  "partition": "train.csv",
  "input": true,
  "output": true,
  "x": 450,
  "y": 300,
  "wires": [
    [
      "32131acc74685f2f"
    ],
    [
```

```
        "109b2f1fb1b441b1"
    ]
]
},
{
    "id": "dc0e45d2cca5fb0a",
    "type": "inject",
    "z": "47a34765e588b147",
    "name": "start",
    "repeat": "",
    "crontab": "",
    "once": false,
    "onceDelay": 0.1,
    "topic": "",
    "payload": "",
    "payloadType": "date",
    "x": 270,
    "y": 300,
    "wires": [
        [
            "86b689b18fcb0f21"
        ]
    ]
},
{
    "id": "109b2f1fb1b441b1",
    "type": "debug",
    "z": "47a34765e588b147",
```

```
"name": "error",
"active": true,
"tosidebar": true,
"console": false,
"tostatus": false,
"complete": "payload",
"targetType": "msg",
"statusVal": "",
"statusType": "auto",
"x": 810,
"y": 340,
"wires": []
},
{
  "id": "fa849d7bd14e5596",
  "type": "debug",
  "z": "47a34765e588b147",
  "name": "print",
  "active": true,
  "tosidebar": true,
  "console": false,
  "tostatus": false,
  "complete": "payload",
  "targetType": "msg",
  "statusVal": "",
  "statusType": "auto",
  "x": 930,
  "y": 240,
```

```
"wires": []
},
{
  "id": "32131acc74685f2f",
  "type": "decision tree classifier",
  "z": "47a34765e588b147",
  "name": "decision tree classifier trainer",
  "savePath": "test/models",
  "saveName": "dtc.b",
  "maxDepth": "",
  "criterion": "gini",
  "splitter": "best",
  "x": 700,
  "y": 260,
  "wires": [
    [
      "fa849d7bd14e5596"
    ],
    [
      "109b2f1fb1b441b1"
    ]
  ]
},
{
  "id": "da38ee32977db952",
  "type": "inject",
  "z": "47a34765e588b147",
  "name": "start",
```

```
"repeat": "",
"crontab": "",
"once": false,
"onceDelay": 0.1,
"topic": "",
"payload": "",
"payloadType": "date",
"x": 250,
"y": 540,
"wires": [
  [
    "603be35307aa54c0",
    "d1e24c1b9164f594"
  ]
]
},
{
  "id": "685fe9da18dfe937",
  "type": "predictor",
  "z": "47a34765e588b147",
  "name": "decision tree classifier predictor",
  "modelPath": "test/models",
  "modelName": "dtc.b",
  "x": 690,
  "y": 520,
  "wires": [
    [
      "aaaa24b5c760973c"
    ]
  ]
}
```



```
    ],  
    [  
        "9fa716700db0457c"  
    ]  
]  
},  
{  
    "id": "aaaa24b5c760973c",  
    "type": "assessment",  
    "z": "47a34765e588b147",  
    "name": "",  
    "score": "accuracy_score",  
    "x": 730,  
    "y": 460,  
    "wires": [  
        [  
            "e23fe081cab4b8ba"  
        ],  
        [  
            "9fa716700db0457c"  
        ]  
    ]  
},  
{  
    "id": "603be35307aa54c0",  
    "type": "load dataset",  
    "z": "47a34765e588b147",  
    "name": "",
```

```
"datasetFolder": "D:\\VIT\\Academics\\Winter Semester 24-25\\ECE3502-
IoT_Domain_Analyst\\Lab\\dataset\\Train",

"datasetName": "Iris",

"partition": "test.csv",

"input": false,

"output": true,

"x": 430,

"y": 460,

"wires": [

  [

    "aaaa24b5c760973c"

  ],

  [

    "9fa716700db0457c"

  ]

]

},

{

  "id": "d1e24c1b9164f594",

  "type": "load dataset",

  "z": "47a34765e588b147",

  "name": "",

  "datasetFolder": "D:\\VIT\\Academics\\Winter Semester 24-25\\ECE3502-
IoT_Domain_Analyst\\Lab\\dataset\\Train",

  "datasetName": "Iris",

  "partition": "test.csv",

  "input": true,

  "output": false,

  "x": 430,
```

```
"y": 580,
"wires": [
  [
    "685fe9da18dfe937"
  ],
  [
    "9fa716700db0457c"
  ]
]
},
{
  "id": "9fa716700db0457c",
  "type": "debug",
  "z": "47a34765e588b147",
  "name": "error",
  "active": true,
  "tosidebar": true,
  "console": false,
  "tostatus": false,
  "complete": "payload",
  "targetType": "msg",
  "statusVal": "",
  "statusType": "auto",
  "x": 930,
  "y": 580,
  "wires": []
},
{
```

```
"id": "e23fe081cab4b8ba",
"type": "debug",
"z": "47a34765e588b147",
"name": "print",
"active": true,
"tosidebar": true,
"console": false,
"tostatus": false,
"complete": "payload",
"targetType": "msg",
"statusVal": "",
"statusType": "auto",
"x": 930,
"y": 460,
"wires": []
},
{
  "id": "058949def876c8ff",
  "type": "mqtt in",
  "z": "47a34765e588b147",
  "name": "mqtt",
  "topic": "hello",
  "qos": "2",
  "datatype": "auto-detect",
  "broker": "97a9c989fbfd476f",
  "nl": false,
  "rap": true,
  "rh": 0,
```

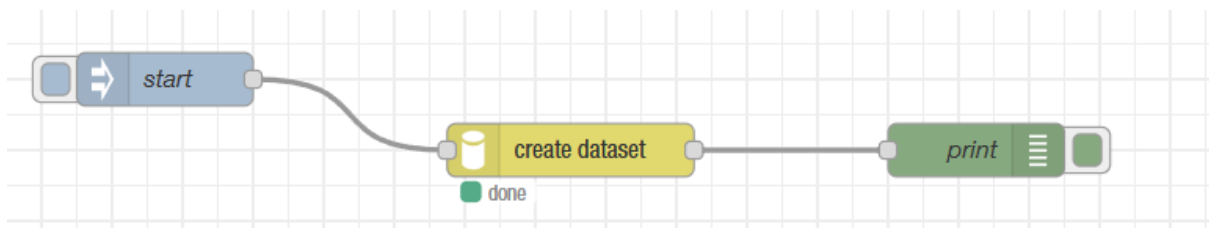
```
"inputs": 0,
"x": 370,
"y": 820,
"wires": [
  [
    "59b0939cf8d5de79"
  ]
]
},
{
  "id": "b8e2943b74434cfc",
  "type": "mqtt out",
  "z": "47a34765e588b147",
  "name": "mqtt",
  "topic": "hello",
  "qos": "",
  "retain": "",
  "respTopic": "",
  "contentType": "",
  "userProps": "",
  "correl": "",
  "expiry": "",
  "broker": "97a9c989fbfd476f",
  "x": 950,
  "y": 760,
  "wires": []
},
{
```

```
"id": "59b0939cf8d5de79",
"type": "predictor",
"z": "47a34765e588b147",
"name": "decision tree classifier predictor",
"modelPath": "test/models",
"modelName": "dtc.b",
"x": 660,
"y": 800,
"wires": [
  [
    "b8e2943b74434cfc"
  ],
  [
    "20a7043cbe9663f8"
  ]
],
{
  "id": "20a7043cbe9663f8",
  "type": "debug",
  "z": "47a34765e588b147",
  "name": "debug 1",
  "active": true,
  "tosidebar": true,
  "console": false,
  "tostatus": false,
  "complete": "false",
  "statusVal": "",
```

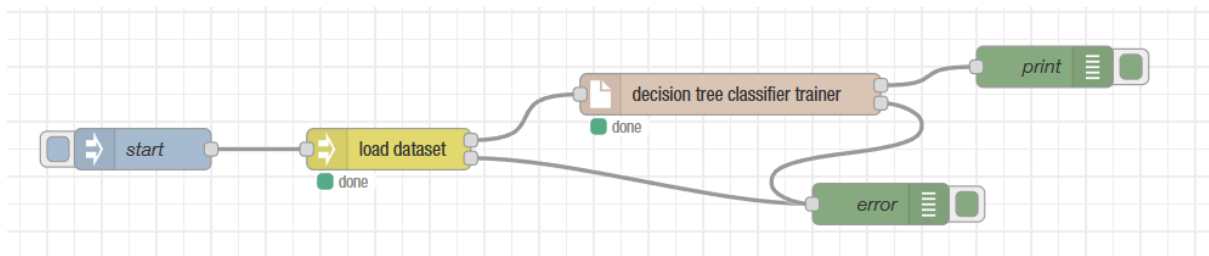
```
"statusType": "auto",  
"x": 950,  
"y": 840,  
"wires": []  
},  
{  
  "id": "97a9c989fbfd476f",  
  "type": "mqtt-broker",  
  "name": "",  
  "broker": "localhost",  
  "port": "1883",  
  "clientId": "",  
  "autoConnect": true,  
  "usetls": false,  
  "protocolVersion": "4",  
  "keepalive": "60",  
  "cleansession": true,  
  "autoUnsubscribe": true,  
  "birthTopic": "",  
  "birthQos": "0",  
  "birthRetain": "false",  
  "birthPayload": "",  
  "birthMsg": {},  
  "closeTopic": "",  
  "closeQos": "0",  
  "closeRetain": "false",  
  "closePayload": "",  
  "closeMsg": {},
```

```
"willTopic": "",  
"willQos": "0",  
"willRetain": "false",  
"willPayload": "",  
"willMsg": {},  
"userProps": "",  
"sessionExpiry": ""  
}  
]
```

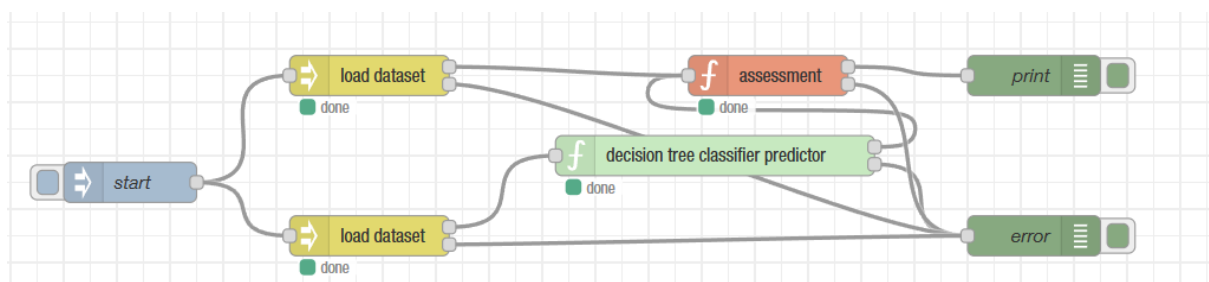

Each Flow with Output:



```
3/10/2025, 10:42:55 PM node: print
msg.payload : string[18]
▶ "Dataset created.↵"
```



```
3/10/2025, 10:43:25 PM node: print
real : msg.payload : string[47]
▶ "decision-tree-classifier: training
completed.↵"
```



```
3/10/2025, 10:43:40 PM node: print
predicted : msg.payload : number
0.9333333333333333
```

