



**ECE 3502- IOT DOMAIN ANALYST
ASSIGNMENT**

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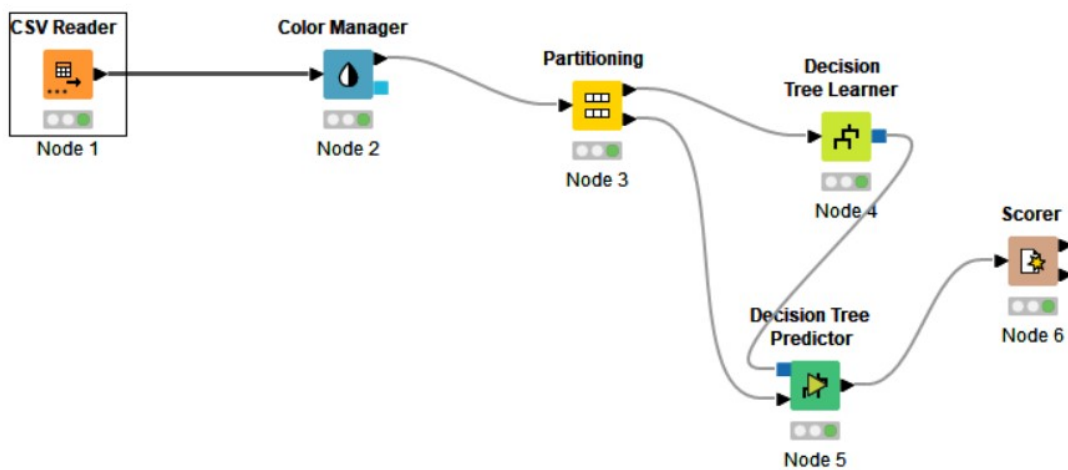
PROF.- SRIRAMALAKSHMI P

AIM- Performing decision tree algorithm in KNIME ANALYTICS

DATASET-

Row ID	I Id	D SepalLe...	D SepalW...	D PetalLe...	D PetalWi...	S Species
Row0	1	5.1	3.5	1.4	0.2	Iris-setosa
Row1	2	4.9	3	1.4	0.2	Iris-setosa
Row2	3	4.7	3.2	1.3	0.2	Iris-virginica
Row3	4	4.6	3.1	1.5	0.2	Iris-setosa
Row4	5	5	3.6	1.4	0.2	Iris-setosa
Row5	6	5.4	3.9	1.7	0.4	Iris-setosa
Row6	27	5	3.4	1.6	0.4	Iris-setosa
Row7	28	5.2	3.5	1.5	0.2	Iris-setosa
Row8	110	7.2	3.6	6.1	2.5	Iris-virginica
Row9	111	6.5	3.2	5.1	2	Iris-virginica
Row10	112	6.4	2.7	5.3	1.9	Iris-virginica

Node Flow-



KNIME Analytics Platform

File Edit View Node Help

100%

KNIME Explorer

- My-KNIME-Hub (api.hub.knime.com)
- EXAMPLES (knime@api.hub.knime.com)
- LOCAL (Local Workspace)
 - Example Workflows
 - 4_april_2
 - 4April
 - IOT_DA1
 - lab213

Workflow Coach

[Node recommendations only available with usage data reporting](#)

Node Repository

- IO
- Manipulation
- Views
- Analytics
- DB
- Other Data Types
- Structured Data
- Scripting
- Tools & Services
- KNIME Labs
- Workflow Control
- Workflow Abstraction
- Reporting

lab213 5: IOT_DA1 *4: 4April 3: 4_april_2

CSV Reader (Node 1) → Color Manager (Node 2) → Partitioning (Node 3) → Decision Tree Learner (Node 4) → Decision Tree Predictor (Node 5) → Scorer (Node 6)

CSV Reader

Reads CSV files. To auto-guess the structure of the file click the Autodetect format button. If you encounter problems with incorrect guessed data types disable the Limit data rows scanned option in the Advanced Settings tab. If the input file structure changes between different invocations, enable the Support changing file schemas option in the Advanced Settings tab. For further details see the KNIME File Handling Guide [File Handling Guide](#).

Note: If you find that this node can't read your file, try the File Reader node. It offers more

Outline

KNIME Console

```
=====
*** Welcome to KNIME Analytics Platform v4.5.1.v202201200941 ***
*** Copyright by KNIME AG, Zurich, Switzerland ***
=====
Log file is located at: C:\Users\tanna\knime-workspace\.metadata\knime\knime.log
```

Node properties-

Dialog - 3:4 - Decision Tree Learner

File

Options PMMLSettings Flow Variables

General

Class column **S** Species ▾

Quality measure Gini index ▾

Pruning method No pruning ▾

☒ Reduced Error Pruning

Min number records per node 2 ▴ ▾

Number records to store for view 10,000 ▴ ▾

☒ Average split point

Number threads 8 ▴ ▾

☒ Skip nominal columns without domain information

Root split

☐ Force root split column

Root split column **D** PetalWidthCm ▾

Binary nominal splits

☐ Binary nominal splits

Max #nominal 10 ▴ ▾

☐ Filter invalid attribute values in child nodes

OK Apply Cancel ?

File

Scorer Flow Variables Memory Policy

First Column

S Species ▼

Second Column

S Prediction (Species) ▼

Sorting of values in tables

Sorting strategy: Insertion order ▼ ☐ Reverse order

Provide scores as flow variables

☐ Use name prefix

Missing values

In case of missing values: ☒ Ignore
☐ Fail

OK

Apply

Cancel



Output-

Confusion Matrix - 3:6 - Scorer			
File Hilite			
Species \ P...	Iris-setosa	Iris-virginica	Iris-versicolor
Iris-setosa	5	0	0
Iris-virginica	1	13	0
Iris-versicolor	1	0	16
Correct classified: 34			
Wrong classified: 2			
Accuracy: 94.444%			
Error: 5.556%			
Cohen's kappa (κ): 0.911%			