

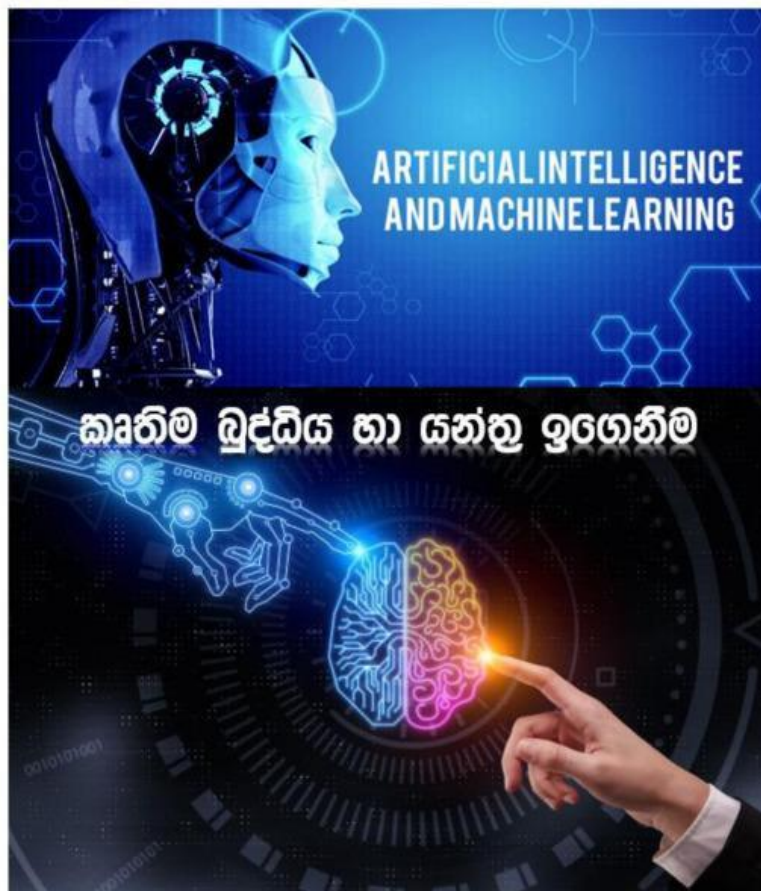
# Project 167



**Coding  
School**

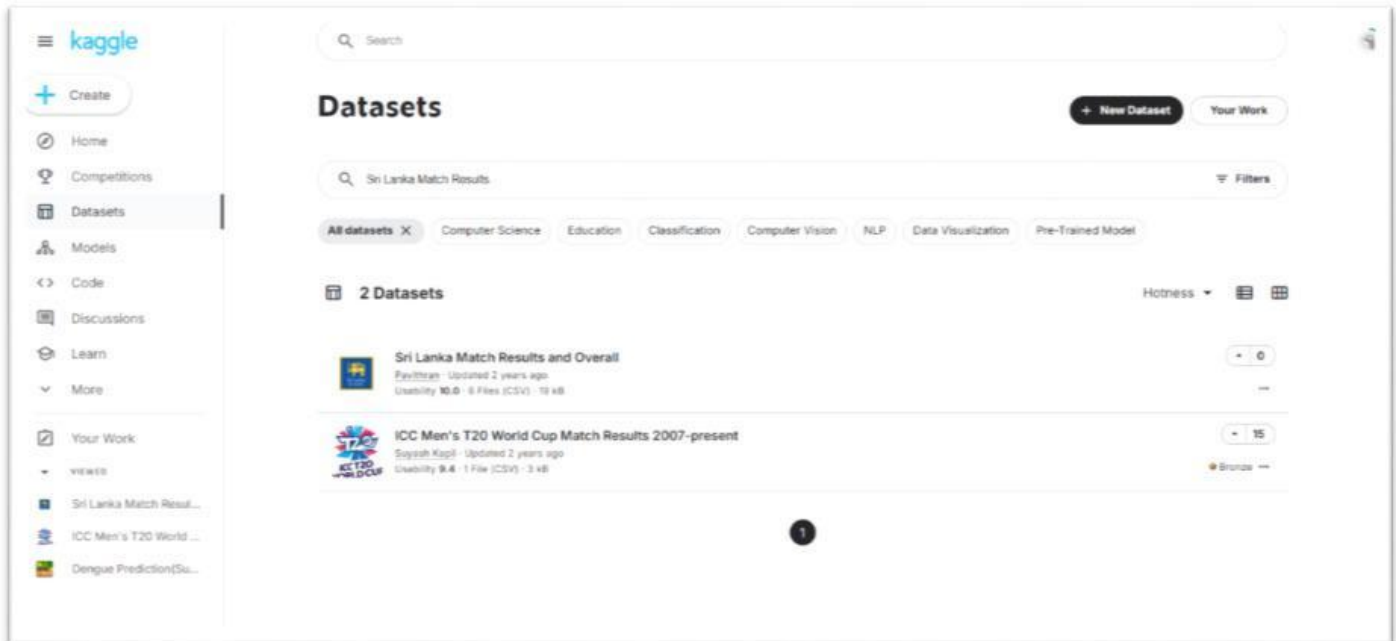


## AI and Machine Learning



**Start here**

- ❖ In the 167th homework, train a machine learning model using a dataset from the kaggle website and use that model to create a mobile app through the App lab
- ❖ First let's see if there is a dataset related to the Sri Lankan cricket team.
- ❖ First log into your kaggle website account.
- ❖ Now click on the Datasets tab in the side bar.
- ❖ Search as Sri Lanka Match Results.



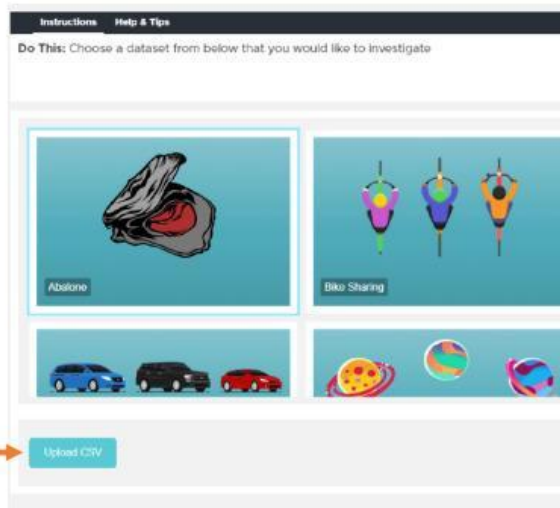
- ❖ Now click on the Sri Lanka Match Results and Overall dataset from the received results.



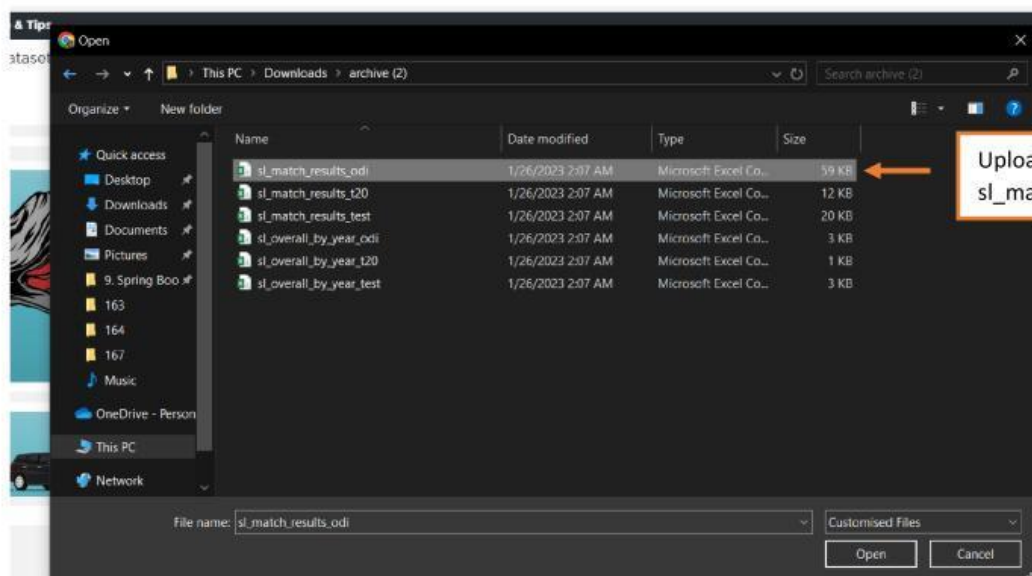
- ❖ Download the dataset.

The screenshot shows a Kaggle dataset page titled "Sri Lanka Match Results and Overall" by user PAVITHRAN, updated 2 years ago. The page has a "Download (19 kB)" button highlighted with a red arrow. Below the title, there's a description: "Sri Lanka's match results and overall figures for Test, ODI and T20". To the right is the Sri Lanka Cricket logo. The page is divided into sections: "About Dataset", "Overview", and "Data source". The "Overview" section describes the dataset's content and format. The "Data source" section mentions it was scraped from ESPN Cricinfo using a Python package called cricguru. On the right side, there are metadata fields: "Usability" (10.00), "License" (Attribution 4.0 International (CC BY-SA 4.0)), "Expected update frequency" (Annually), and "Tags" (Cricket).

- ❖ Now extract the downloaded dataset.
- ❖ Let's train a machine learning model using the sl\_match\_results\_odi excel file in that folder.
- ❖ Now click on the start button in the homework and open the AI and machine learning lab.
- ❖ Click on the Upload CSV button and upload the sl\_match\_results\_odi dataset to AI and machine learning lab..

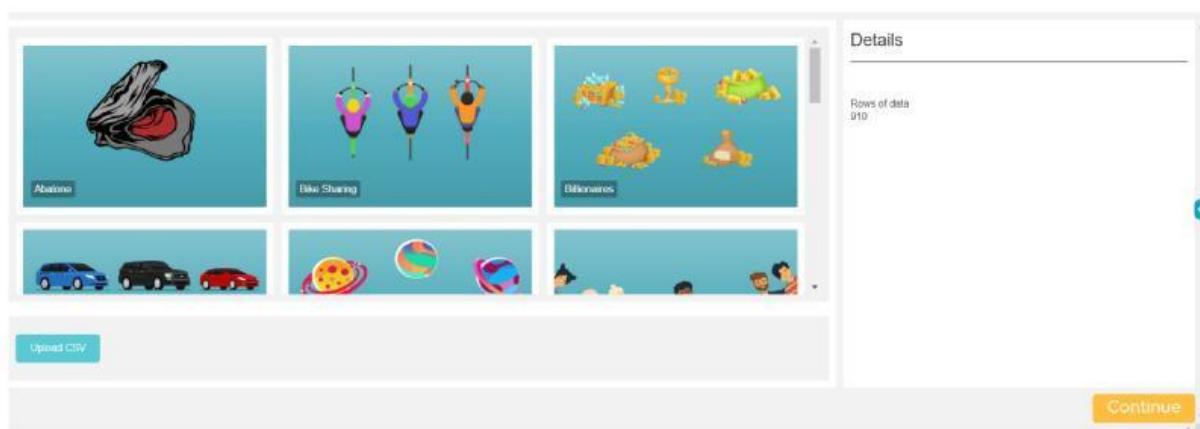


Click on the Upload CSV button.



Upload the sl\_match\_results\_odi dataset.

❖ Click on the Continue button between 910 rows of that data set.



- ❖ Now select the label you want to predict.
- ❖ Here we are predicting the defeat of the Sri Lanka cricket team.
- ❖ Select the result label for that.

Predict Result based on Start Date

Team	Result	Margin	BR	Toss	Bat	Opposition	Ground	Start Date
Sri Lanka	lost	9 wickets	236	lost	1st	v West Indies	Manchester	7-Jun-75
Sri Lanka	lost	52 runs	0	won	2nd	v Australia	The Oval	11-Jun-75
Sri Lanka	lost	192 runs	0	won	2nd	v Pakistan	Nottingham	14-Jun-75
Sri Lanka	lost	9 wickets	74	lost	1st	v New Zealand	Nottingham	9-Jun-79
Sri Lanka	drawn	-	0	-	-	v West Indies	The Oval	13-Jun-79
Sri Lanka	won	47 runs	0	lost	1st	v India	Manchester	16-Jun-79
Sri Lanka	lost	5 runs	0	won	2nd	v England	Colombo (SBC)	13-Feb-82
Sri Lanka	won	3 runs	0	lost	1st	v England	Colombo (SBC)	14-Feb-82
Sri Lanka	lost	8 wickets	22	lost	1st	v Pakistan	Karachi	12-Mar-82
Sri Lanka	won	30 runs	0	won	2nd	v Pakistan	Lahore	29-Mar-82
Sri Lanka	lost	5 wickets	11	lost	1st	v Pakistan	Karachi	31-Mar-82
Sri Lanka	lost	78 runs	0	won	2nd	v India	Amritsar	12-Sep-82
Sri Lanka	lost	6 wickets	55	won	1st	v India	Delhi	15-Sep-82
Sri Lanka	lost	6 wickets	54	won	1st	v India	Bengaluru	26-Sep-82

There are 910 rows of data. (Showing first 100 rows)

Result

Data type  
categorical

Column information  
6 values were found in this column. A graph is only shown when there are 5 or fewer

Select label

- ❖ Now click on the continue button.
- ❖ Now select the labels you want to predict.
- ❖ For that select BR, Toss, Bat and opposition teams labels.

Predict Result based on BR, Toss, Bat, Opposition

Team	Result	Margin	BR	Toss	Bat	Opposition	Ground	Start Date
Sri Lanka	lost	9 wickets	236	lost	1st	v West Indies	Manchester	7-Jun-75
Sri Lanka	lost	52 runs	0	won	2nd	v Australia	The Oval	11-Jun-75
Sri Lanka	lost	192 runs	0	won	2nd	v Pakistan	Nottingham	14-Jun-75
Sri Lanka	lost	9 wickets	74	lost	1st	v New Zealand	Nottingham	9-Jun-79
Sri Lanka	drawn	-	0	-	-	v West Indies	The Oval	13-Jun-79
Sri Lanka	won	47 runs	0	lost	1st	v India	Manchester	16-Jun-79
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Sri Lanka	lost	6 wickets	54	won	1st	v India	Bengaluru	26-Sep-82

There are 910 rows of data. (Showing first 100 rows)

Back
Train

Start Date

Data Type  
categorical

Relationship information  
The currently selected data is too large to show in a table

Column information  
910 values were found in this column. A graph is only shown when there are 5 or fewer

Note  
Categorical columns with more than 50 unique values can not be selected as the label or a feature

- ❖ Now click on train



- ❖ Then based on the BR value of the Sri Lankan team and whether the Toss was passed or not and whether the Sri Lankan team bats first or not and what is the opposition team, when this model was trained, a good value of 73.63% accuracy was obtained

Predict **Result** based on **BR**, **Toss**, **Bat**, **Opposition** 73.63%

- ❖ Now this model was trained by killing each label.
- ❖ Then the following type of accuracy is obtained.

Result		Accuracy
Predict <b>Result</b> based on <b>BR</b> , <b>Toss</b> , <b>Bat</b>	87.91%	<a href="#">Details</a>
Previous results		Accuracy
Predict <b>Result</b> based on <b>Bat</b> , <b>Opposition</b> , <b>BR</b>	81.32%	
Predict <b>Result</b> based on <b>Toss</b> , <b>Bat</b> , <b>Opposition</b>	54.95%	
Predict <b>Result</b> based on <b>BR</b> , <b>Toss</b> , <b>Bat</b>	84.62%	
Predict <b>Result</b> based on <b>BR</b> , <b>Toss</b> , <b>Bat</b> , <b>Opposition</b>	73.63%	

- ❖ When the model was trained based on whether the Sri Lankan team took the Toss or not and what the opposition team was and based on the BR value, an accuracy of 54.95% was obtained.
- ❖ When this model was trained based on whether the Sri Lankan team is batting first or not and what the opposition team is and based on the BR value, an accuracy of 81.32% was obtained.
- ❖ When this model was trained based on the BR value of the Sri Lankan team and whether the toss was passed or not and whether the Sri Lankan team batted first or not, a good value of 87.91% accuracy was obtained.

- ❖ Among these, let's consider the case where the accuracy is the highest, 87.91%.

### Try it out!


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BR

Toss

Bat

Predict



A.I.

### A.I. predicts

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Result  
lost

- ❖ Let's save the model at that time.
- ❖ Now click on the continue button.
- ❖ Give slCricketModel for the name of the model.

Predict **Result** based on **BR**, **Toss**, **Bat**

Model name (required)

Intended Use  
 Describe the problem you think this model could help solve, or one potential app someone could make with this model.

Limitations and Warnings  
 Describe any limitations in how this model was created or how it should be used. You may say things like "Avoid using this model for..." or "Be cautious about..." Important questions to consider are:  
 • Does the data represent all possible users and scenarios?  
 • Did you gather enough data to be confident in the model's accuracy?  
 • Are there situations where this model definitely shouldn't be used?

**Back** **Save**

- ❖ Now click on the save button.
- ❖ Then the details of the model we created will be displayed as below.



siCricketModel	
Accuracy	
87.91%	
Intended Use	
Limitations and Warnings	
About the Data	
Dataset size 910 rows	
Features and Label	
Predict Result based on BR, Toss, Bat	
Label	
Result Possible Values lost aban won n/r tied cano	
Features	
BR Possible Values min 0 max 274	
Toss Possible Values lost won -	
Bat Possible Values 1st 2nd -	

- ❖ Now click on Finish button.