

# ASSIGNMENT – 2

## RISK ANALYSIS OF SPACE SHUTTLE

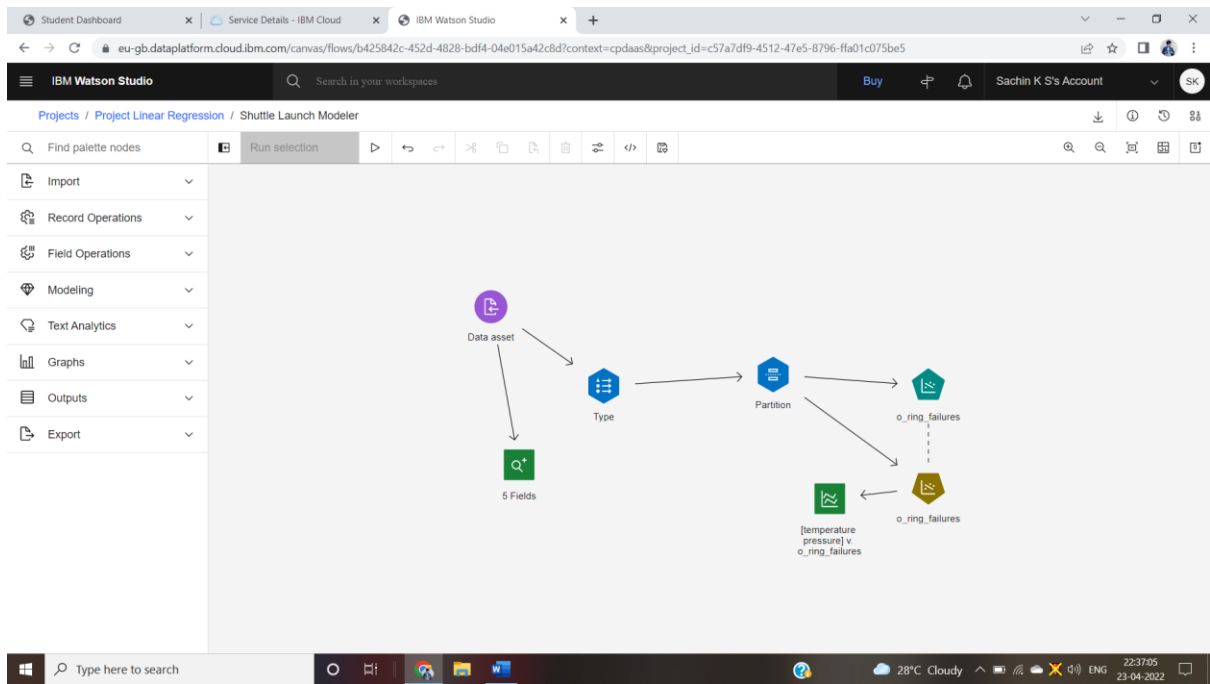
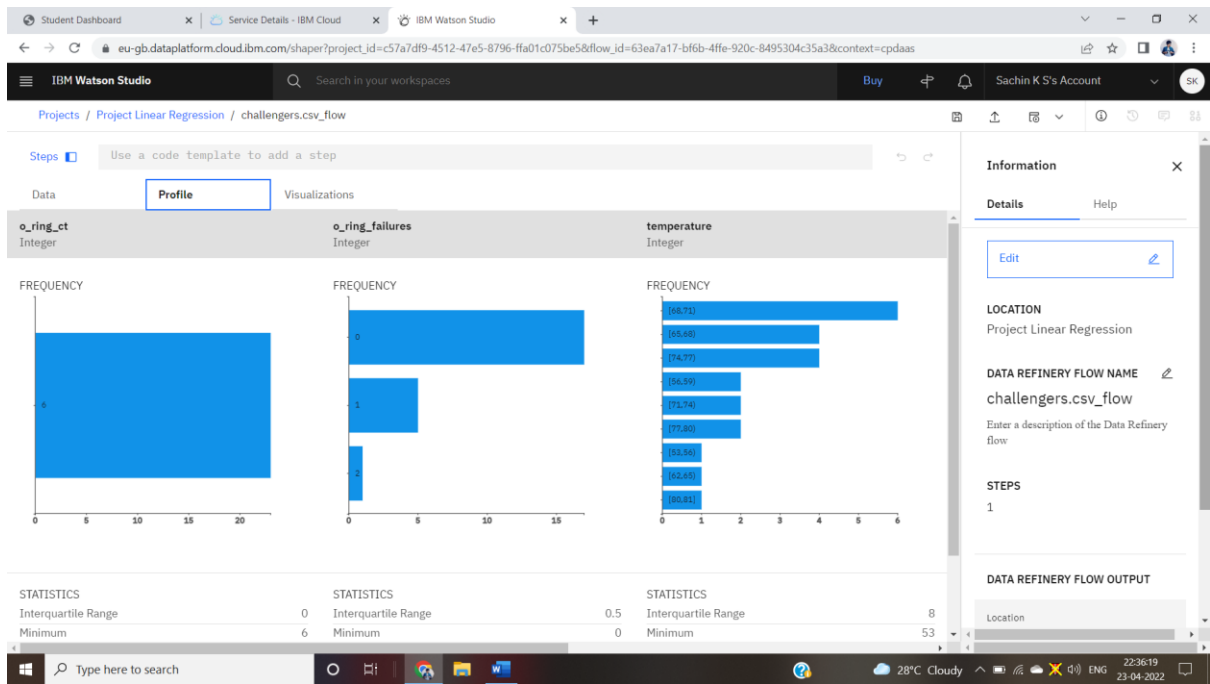
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Campus : VIT Vellore

The screenshot displays the IBM Watson Studio web interface. The main area shows a data table with 14 rows and 6 columns. The columns are labeled: o\_ring\_ct (Integer), o\_ring\_failu... (Integer), temperature (Integer), pressure (Integer), and launch\_id (Integer). The table contains numerical data for each row. On the right side, there is an 'Information' panel with tabs for 'Details' and 'Help'. The 'Details' tab is active, showing fields like 'LOCATION' (Project Linear Regression), 'DATA REFINERY FLOW NAME' (challengers.csv\_flow), and 'STEPS' (1). At the bottom, a status bar indicates 'SOURCE FILE: challengers.csv' and 'FULL DATA SET: 23 rows'.

	o_ring_ct Integer	o_ring_failu... Integer	temperature Integer	pressure Integer	launch_id Integer
1	6	0	66	50	1
2	6	1	70	50	2
3	6	0	69	50	3
4	6	0	68	50	4
5	6	0	67	50	5
6	6	0	72	50	6
7	6	0	73	100	7
8	6	0	70	100	8
9	6	1	57	200	9
10	6	1	63	200	10
11	6	1	70	200	11
12	6	0	78	200	12
13	6	0	67	200	13
14	6	2	53	200	14



Student Dashboard | Service Details - IBM Cloud | IBM Watson Studio

eu-gb.dataplatform.cloud.ibm.com/canvas/flows/b425842c-452d-4828-bdf4-04e015a42c8d?context=cpdaas&project\_id=c57a7df9-4512-47e5-8796-ffa01c075be5

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Projects / Project Linear Regression / Shuttle Launch Modeler

Find palette nodes

- Import
- Record Operations
- Field Operations
- Modeling
- Text Analytics
- Graphs
- Outputs
- Export

Type

Settings

Read values | Clear values

Find in column Field

Field	Measure	Role	Value mode	Values
# o_ring_ct	Continuous	None	Instantiated	6, 6
# o_ring_failures	Continuous	Target	Instantiated	0, 2
# temperature	Continuous	Input	Instantiated	53, 81
# pressure	Continuous	Input	Instantiated	50, 200
# launch_id	Continuous	None	Instantiated	1, 23

Default mode

☒ Read metadata ☐ Pass (do not scan)

Set unique fields to None

Set categorical fields to None if they exceed this many values | Set continuous integer field to ordinal if range less than or equal to

Cancel | Save

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### View Model: o\_ring\_failures

Regression

EVALUATION

**Model Summary**

ANOVA

Coefficients

MODEL VIEWER

Build Settings

Training Summary

#### Model Summary

	1
R	0.822 [1]
R Square	0.676
Adjusted R Square	0.633
Std. Error of the Estimate	0.368

[1] Predictors: (Constant), %1, pressuretemperature

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#### ANOVA

	1		
	Regression	Residual	Total
Sum of Squares	4.243	2.034	6.278
df	2.000	15.000	17.000
Mean Square	2.122	0.136	
F	15.645		
Sig.	0.000		

Type here to search

28°C Cloudy

22:44:25  
23-04-2022

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#### Coefficients

		1		
		(Constant)	temperature	pressure
Unstandardized Coefficients	B	4.181	-0.060	0.003
	Std. Error	0.832	0.012	0.001
Standardized Coefficients		Beta	-0.763	0.298
t		5.025	-5.194	2.027
Sig.		0.000	0.000	0.061
Fraction Missing Info.				

Type here to search

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22:44:40  
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eu-gb.dataplatform.cloud.ibm.com/canvas/flows/b425842c-452d-4828-bdf4-04e015a42c8d?context=cpdaas&project\_id=c57a7df9-4512-47e5-8796-f1a01c075be5

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**Build Settings**

Training Summary

#### Build Settings

Use partitioned data	true
Calculate predictor importance	true
Method	Enter
Include constant in equation	true
Use weight	false
Mode	Simple

Type here to search | 28°C Cloudy | 22:44:54 23-04-2022

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eu-gb.dataplatform.cloud.ibm.com/canvas/flows/b425842c-452d-4828-bdf4-04e015a42c8d?context=cpdaas&project\_id=c57a7df9-4512-47e5-8796-f1a01c075be5

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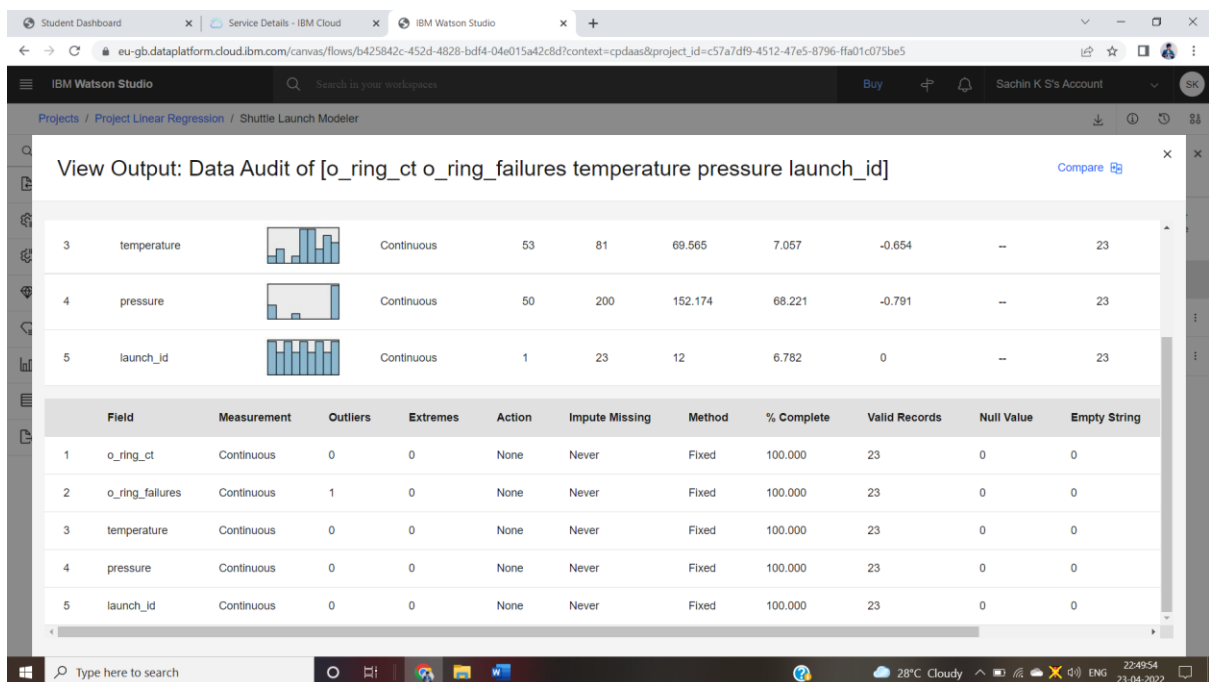
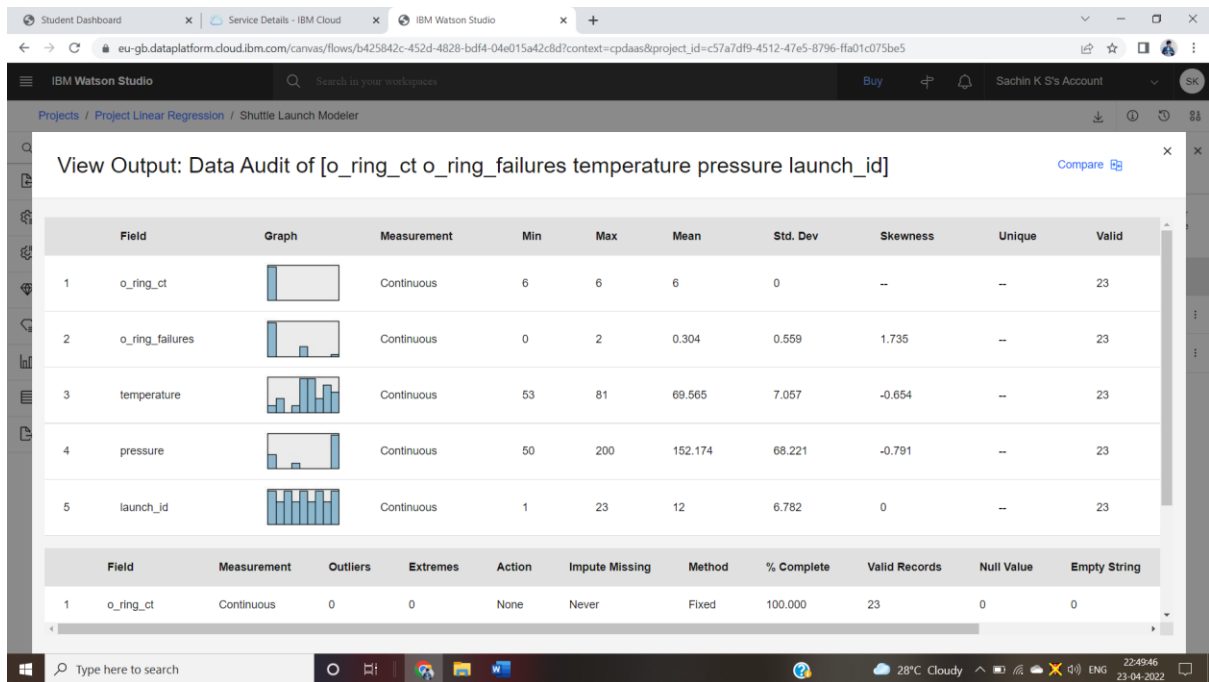
Build Settings

**Training Summary**

#### Training Summary

Algorithm	Regression
Model type	Approximation
Date built	Wed Apr 20 06:54:47 UTC 2022
Elapsed time for model build	0 hours, 0 mins, 3 secs

Type here to search | 28°C Cloudy | 22:45:07 23-04-2022



View Output: temperature v. pressure v. \$E-o\_ring\_failures

