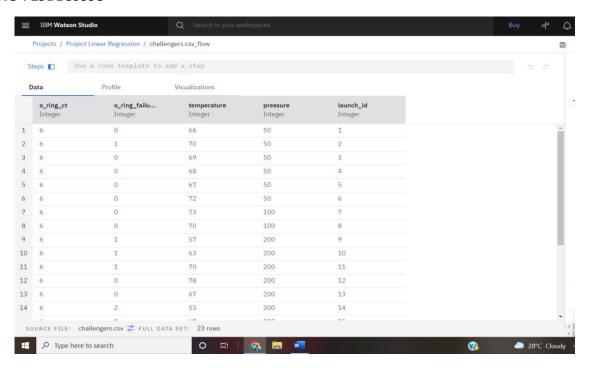# DATA ANALYTICS
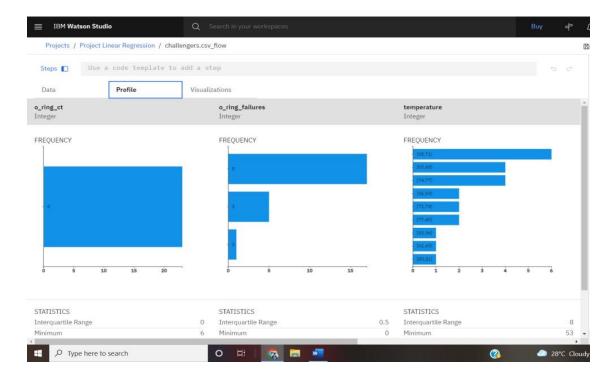
# ASSIGNMENT-2
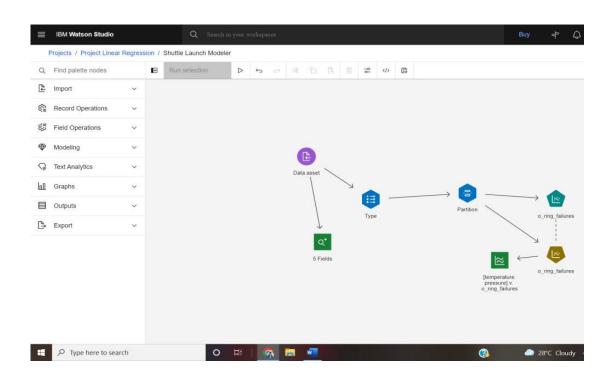
# VIT-VELLORE CAMPUS

**NAME: VENGATESH R**

**REG.NO : 19BEC0398**

Projects / Project Linear Regression / Shuttle Launch Modeler

# 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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Projects / Project Linear Regression / Shuttle Launch Modeler

# View Model: o_ring_failures

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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 | | |

# View Model: o_ring_failures

Regression

EVALUATION

Model Summary

ANOVA

**Coefficients**

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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. | | | | | |

## View Output: Data Audit of [o_ring_ct o_ring_failures temperature pressure launch_id]

Compare

| | Field | Graph | Measurement | Min | Max | Mean | Std. Dev | Skewness | Unique | Valid |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | o_ring_ct | | Continuous | 6 | 6 | 6 | 0 | -- | -- | 23 |
| 2 | o_ring_failures | | Continuous | 0 | 2 | 0.304 | 0.559 | 1.735 | -- | 23 |
| 3 | temperature | | Continuous | 53 | 81 | 69.565 | 7.057 | -0.654 | -- | 23 |
| 4 | pressure | | Continuous | 50 | 200 | 152.174 | 68.221 | -0.791 | -- | 23 |
| 5 | launch_id | | Continuous | 1 | 23 | 12 | 6.782 | 0 | -- | 23 |

| | Field | Measurement | Outliers | Extremes | Action | Impute Missing | Method | % Complete | Valid Records | Null Value | Empty String |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | o_ring_ct | Continuous | 0 | 0 | None | Never | Fixed | 100.000 | 23 | 0 | 0 |

---

## View Output: Data Audit of [o_ring_ct o_ring_failures temperature pressure launch_id]

Compare

| | Field | Graph | Measurement | Min | Max | Mean | Std. Dev | Skewness | Unique | Valid |
|---|---|---|---|---|---|---|---|---|---|---|
| 3 | temperature | | Continuous | 53 | 81 | 69.565 | 7.057 | -0.654 | -- | 23 |
| 4 | pressure | | Continuous | 50 | 200 | 152.174 | 68.221 | -0.791 | -- | 23 |
| 5 | launch_id | | Continuous | 1 | 23 | 12 | 6.782 | 0 | -- | 23 |

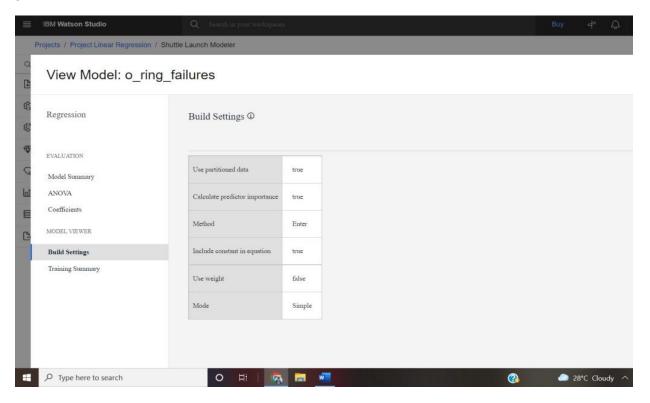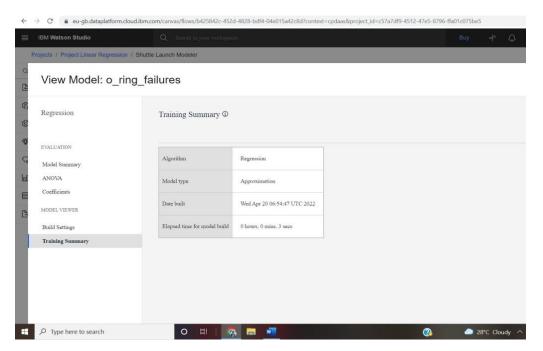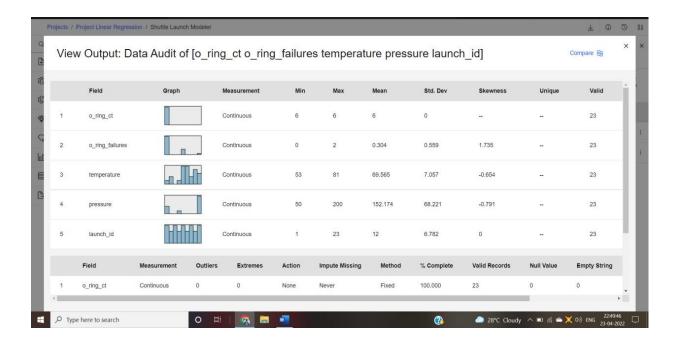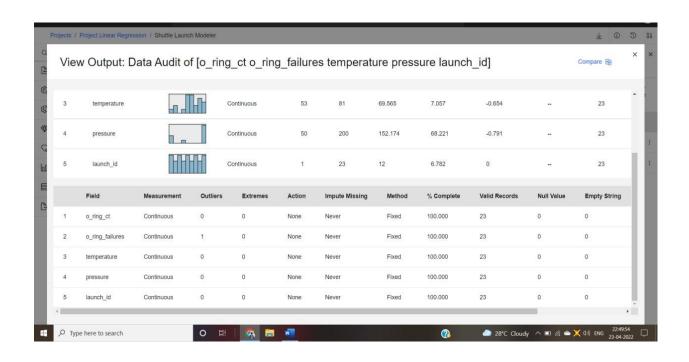| | Field | Measurement | Outliers | Extremes | Action | Impute Missing | Method | % Complete | Valid Records | Null Value | Empty String |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | o_ring_ct | Continuous | 0 | 0 | None | Never | Fixed | 100.000 | 23 | 0 | 0 |
| 2 | o_ring_failures | Continuous | 1 | 0 | None | Never | Fixed | 100.000 | 23 | 0 | 0 |
| 3 | temperature | Continuous | 0 | 0 | None | Never | Fixed | 100.000 | 23 | 0 | 0 |
| 4 | pressure | Continuous | 0 | 0 | None | Never | Fixed | 100.000 | 23 | 0 | 0 |
| 5 | launch_id | Continuous | 0 | 0 | None | Never | Fixed | 100.000 | 23 | 0 | 0 |

## View Output: temperature v. pressure v. $E-o_ring_failures