**2022 #FormulaAIHack**

**Team ExponentialRacingAI**

**Technical submission:**

**Application of Machine Learning Models to provided dataset for the 2022 #FormulaAIHack**

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Task: As non-datascience professionals, our aim was to see if we could replicate **Challenge 1: Data Analytics** during the **#FormulaAIHack** on a low code environment. We succeeded in obtaining, cleaning the dataset and applying chosen Oracle Machine Learning Models to said dataset to achieve the highest possible confidence and accuracy.

1. **Data Sources:**

Game play

**Real world applications:**

Simulations

IoTs

Weather stream

1. Method of Operation :

Dataset > EDA>Oracle Cloud Infrastructure> Oracle Analytics Cloud >Trained Model> Prediction> Prescriptive Analysis/insight

**Dataset:** from data provided at <https://github.com/oracle-devrel/formula-ai-2022-hackathon/blob/main/challenges/challenge1.md> weather.csv

Graphical user interface, text, application

Description automatically generated

Autonomous Data Warehouse

Preliminary data cleanup

Text

Description automatically generated

Further Data cleanup on OAC Dataset

Calendar

Description automatically generated with medium confidence

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Models used:

Random Forest Multi-Classification targeted at column ***M\_RAIN\_PERCENTAGE*** Graphical user interface, application, Teams

Description automatically generated

**88% Accuracy**

Linear Regression Machine Learning Model targeted at column ***M\_WEATHER*** Graphical user interface, application

Description automatically generated96% AccuracyGraphical user interface, text, application, email

Description automatically generated

100% Accuracy (Overfitting)Graphical user interface, application

Description automatically generated

Graphical user interface, application

Description automatically generated

Graphical user interface, text, application

Description automatically generated

**Process Flow in OAC**

Load data

Clean data

Create Data Flow

Train Machine Learning Model

Apply Machine Learning Model

Perform prediction

Prescriptive automated insights

Visualization

Github repository can be found [here](https://github.com/capi-go/FormulaAIHack_ExponentialRacingAI/edit/main/README.md).

Documents can be found [here](https://docs.google.com/presentation/d/1spvq1_uSBN_WZs0oAGaZQYXrjD06JdlTWiHBGRf5IZY/edit?usp=sharing).

Presentation can be found here.