-- Tạo mô hình Linear Regression

CREATE OR REPLACE MODEL `project-tuananh-2023.Tuananh\_ML.formula1\_salary\_linear\_reg`

OPTIONS(model\_type='linear\_reg',

        input\_label\_cols = ['avg\_yearly\_salary']) AS

SELECT \* EXCEPT (int64\_field\_0,name, country,fav\_circuit )

FROM

  `project-tuananh-2023.Tuananh\_ML.formula1\_salary`;

-- Đánh giá mô hình

SELECT \*

FROM ML.EVALUATE(MODEL `project-tuananh-2023.Tuananh\_ML.formula1\_salary\_linear\_reg`,(

SELECT \* EXCEPT (int64\_field\_0,name, country,fav\_circuit )

FROM

  `project-tuananh-2023.Tuananh\_ML.formula1\_salary`));

-- Sử dụng mô hình để dự đoán avg\_yearly\_salary

SELECT

  \*

FROM ML.PREDICT(MODEL `project-tuananh-2023.Tuananh\_ML.formula1\_salary\_linear\_reg`,

  (

    SELECT

      "Mercedes" as team,

      200 as races,

      10 as years\_in\_f1,

      5 as championships,

      70 as gp\_wins,

      65 as podiums,

      90 as poles,

      15 as dnfs,

    FROM

      `project-tuananh-2023.Tuananh\_ML.formula1\_salary`

  )

);

-- Tạo mô hình BOOSTED TREE

CREATE OR REPLACE MODEL `project-tuananh-2023.Tuananh\_ML.formula1\_salary\_boosted\_tree`

OPTIONS(model\_type='BOOSTED\_TREE\_REGRESSOR',

        input\_label\_cols = ['avg\_yearly\_salary']) AS

SELECT \* EXCEPT (int64\_field\_0,name, country,fav\_circuit )

FROM

  `project-tuananh-2023.Tuananh\_ML.formula1\_salary`;

-- Đánh giá mô hình

SELECT \*

FROM ML.EVALUATE(MODEL `project-tuananh-2023.Tuananh\_ML.formula1\_salary\_boosted\_tree`,(

SELECT \* EXCEPT (int64\_field\_0,name, country,fav\_circuit )

FROM

  `project-tuananh-2023.Tuananh\_ML.formula1\_salary`));

-- Sử dụng mô hình để dự đoán avg\_yearly\_salary

SELECT

  \*

FROM ML.PREDICT(MODEL `project-tuananh-2023.Tuananh\_ML.formula1\_salary\_boosted\_tree`,

  (

    SELECT

      "Mercedes" as team,

      200 as races,

      10 as years\_in\_f1,

      5 as championships,

      70 as gp\_wins,

      65 as podiums,

      90 as poles,

      15 as dnfs,

    FROM

      `project-tuananh-2023.Tuananh\_ML.formula1\_salary`

  )

);

-- Tạo mô hình RANDOM FOREST

CREATE OR REPLACE MODEL `project-tuananh-2023.Tuananh\_ML.formula1\_salary\_random\_forest`

OPTIONS(model\_type='RANDOM\_FOREST\_REGRESSOR',

        NUM\_PARALLEL\_TREE = 50,

        input\_label\_cols = ['avg\_yearly\_salary']) AS

SELECT \* EXCEPT (int64\_field\_0,name, country,fav\_circuit )

FROM

  `project-tuananh-2023.Tuananh\_ML.formula1\_salary`;

-- Đánh giá mô hình

SELECT \*

FROM ML.EVALUATE(MODEL `project-tuananh-2023.Tuananh\_ML.formula1\_salary\_random\_forest`,(

SELECT \* EXCEPT (int64\_field\_0,name, country,fav\_circuit )

FROM

  `project-tuananh-2023.Tuananh\_ML.formula1\_salary`));

-- Sử dụng mô hình để dự đoán avg\_yearly\_salary

SELECT

  \*

FROM ML.PREDICT(MODEL `project-tuananh-2023.Tuananh\_ML.formula1\_salary\_random\_forest`,

  (

    SELECT

      "Mercedes" as team,

      200 as races,

      10 as years\_in\_f1,

      5 as championships,

      70 as gp\_wins,

      65 as podiums,

      90 as poles,

      15 as dnfs,

    FROM

      `project-tuananh-2023.Tuananh\_ML.formula1\_salary`

  )

);