

Racing Telemetry Database Project

Executive Summary

Our database is based on the telemetry of cars and their corresponding tracks. The problem we are trying to solve is which car is best suited for a certain track. This problem will be solved by using telemetry statistics of a particular car on a particular track. Our intended audience are the manufacturers of the car brands, while the sponsors are the companies who choose to advertise their name with a specific manufacture. For example, a Mercedes Benz vehicle will have Tag Huer sponsorship.

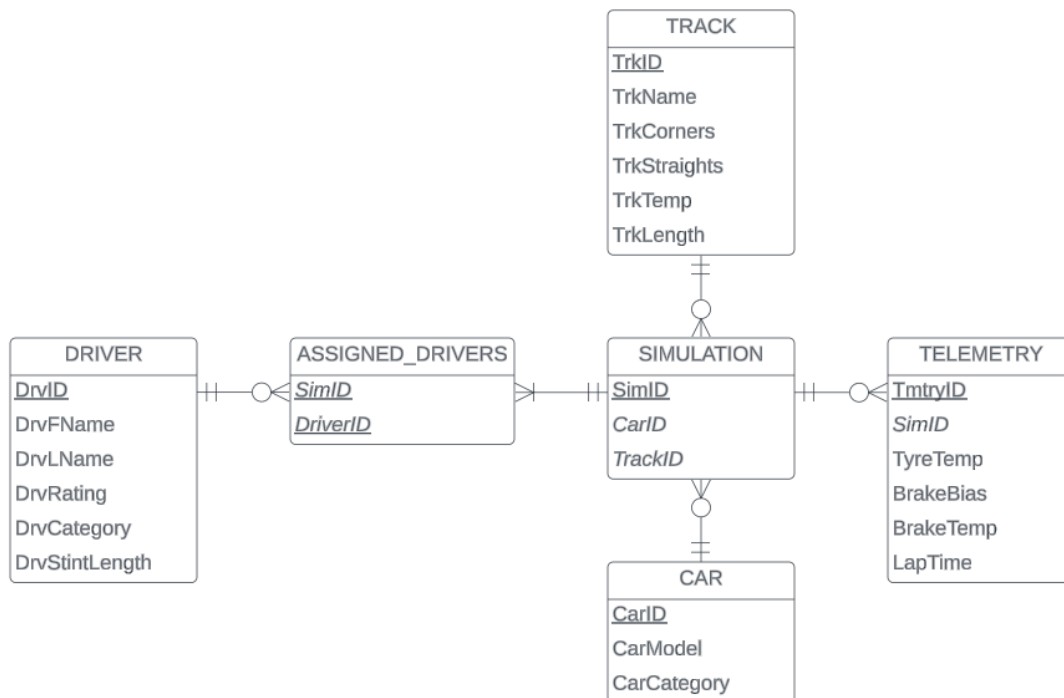
Project Team

Our team is made up of the following members:

- Alexa Guerra
- Faraz Porbanderwala
- Tommy Schendl
- Declan Reuschel

Initial ERD

As any database grows in its design, its model may change during development. An initial entity relationship diagram (ERD) is provided below:



Initial Data Definition Table

Our database has the following tables and attributes, each listed with its definition and purpose:

SIMULATION: Connecting table for a single simulation or run.

<u>SimID (PK)</u>	Surrogate key identifier of one 'run' of a simulation
<i>CarID (FK)</i>	Surrogate key identifier of one particular car
<i>TrackID (FK)</i>	Surrogate key identifier of one particular track

CAR: Table used to hold information on the cars used.

<u>CarID (PK)</u>	Surrogate key identifier of one particular car
CarModel	Model of car
CarCategory	Category of car

TRACK: Table used to hold information on the tracks run on.

<u>TrkID (PK)</u>	Surrogate key identifier of one particular track
TrkName	Name of track
TrkCorners	Number of corners in the track
TrkStraights	Number of straights in the track
TrkTemp	Temperature of the track
TrkLength	Total length of the track

DRIVERS: Table used to hold information on any relevant drivers.

<u>DrvID (PK)</u>	Surrogate key identifier of a particular driver
DrvFName	Driver's first name
DrvLName	Driver's last name
DrvRating	Driver's rating
DrvCategory	Category of driver
DrvStintLength	Length of the driver's stint

ASSIGNED_DRIVERS: Multiple drivers can run in a simulation; this table allows for that.

<u><i>SimID (PK – FK)</i></u>	Surrogate key identifier of one 'run' of a simulation
<u><i>DrvID (PK – FK)</i></u>	Surrogate key identifier of a particular driver

TELEMETRY: Telemetry measurement data taken during each simulation.

<u>TmtryID (PK)</u>	Surrogate key identifier of one telemetry measure
<i>SimID</i>	Surrogate key identifier of one 'run' of a simulation
TyreTemp	Tyre temperature at a certain time
BrakeBias	Brake bias at a certain time
BrakeTemp	Brake temperature at a certain time
LapTime	The moment of time in the lap/run