DRAGLINE

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Team: Maximum Overdrive
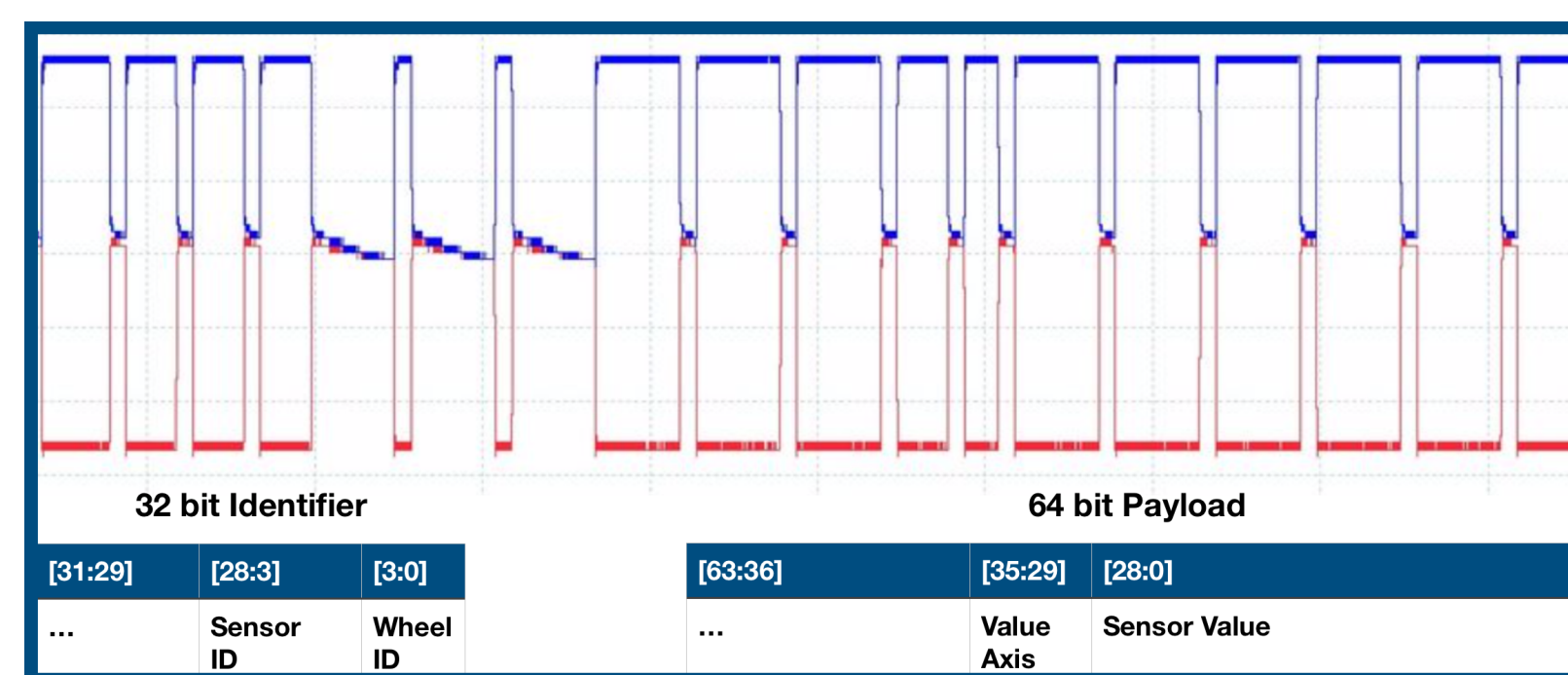
THE UNIVERSITY OF UTAH

Project Overview

DRAGLINE (**D**ynamic **RA**cin**G LINE**) is a software system for racing drivers to improve their skills. It is comprised of two components: real time data collection and display, and an augmented reality-based interface that shows the driver the best path to follow through the course. Developed by students at the University of Utah in collaboration with the University of Utah Formula SAE team, DRAGLINE is an integrated racing system designed to help new drivers and crews on their long journeys to the top.
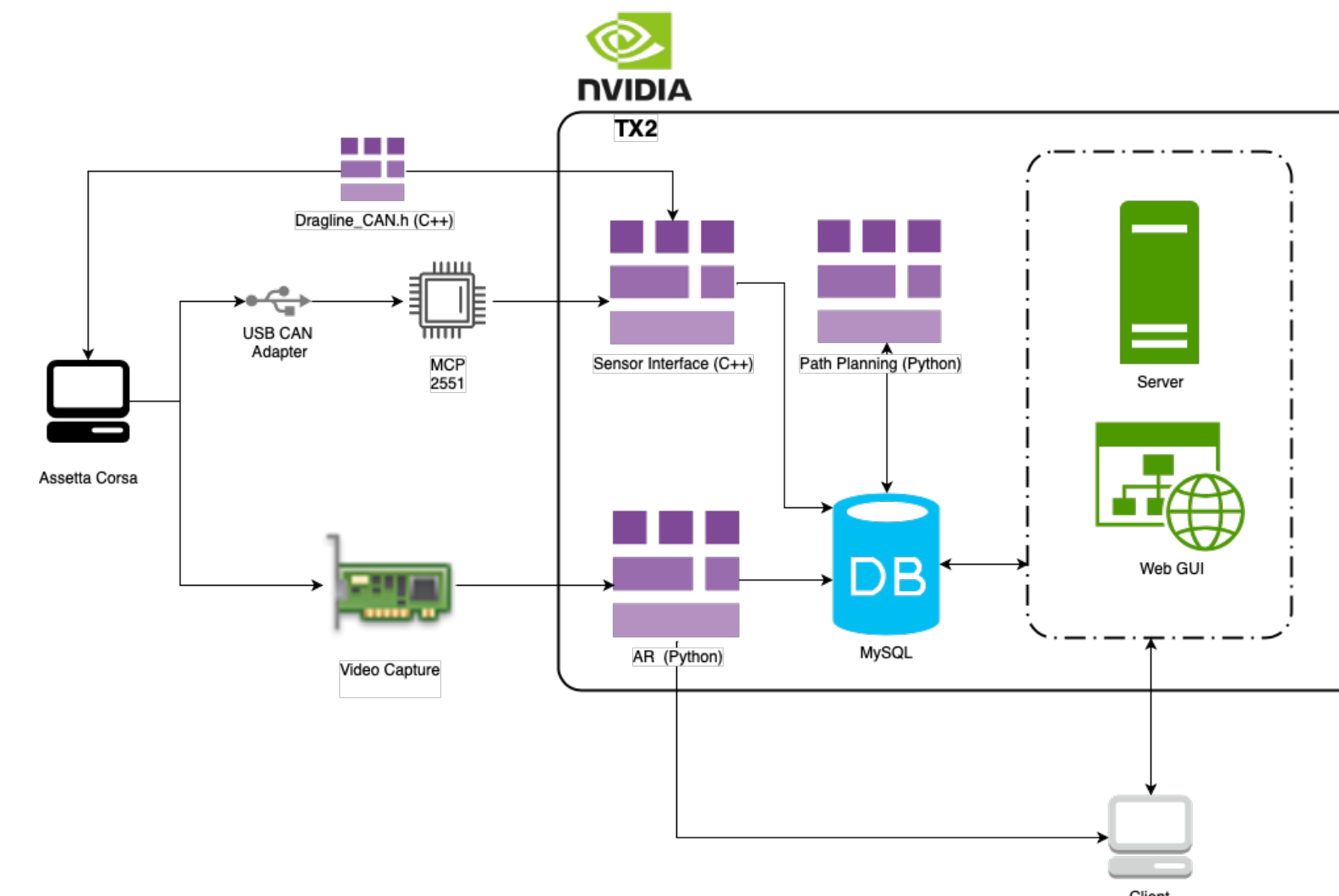
Controller Area Network

Controller Area Network (CAN) allows our system to support multiple sensors. CAN is an industry standard protocol used by automotive companies around the world.

32 bit Identifier			64 bit Payload		
[31:29]	[28:3]	[3:0]	[63:36]	[35:29]	[28:0]
...	Sensor ID	Wheel ID	...	Value Axis	Sensor Value

Via the CAN protocol, DRAGLINE supports sensors such as car speed, accelerator pedal position, brake pedal position, rotations per minute, steering angle, three axes of velocity and much more.
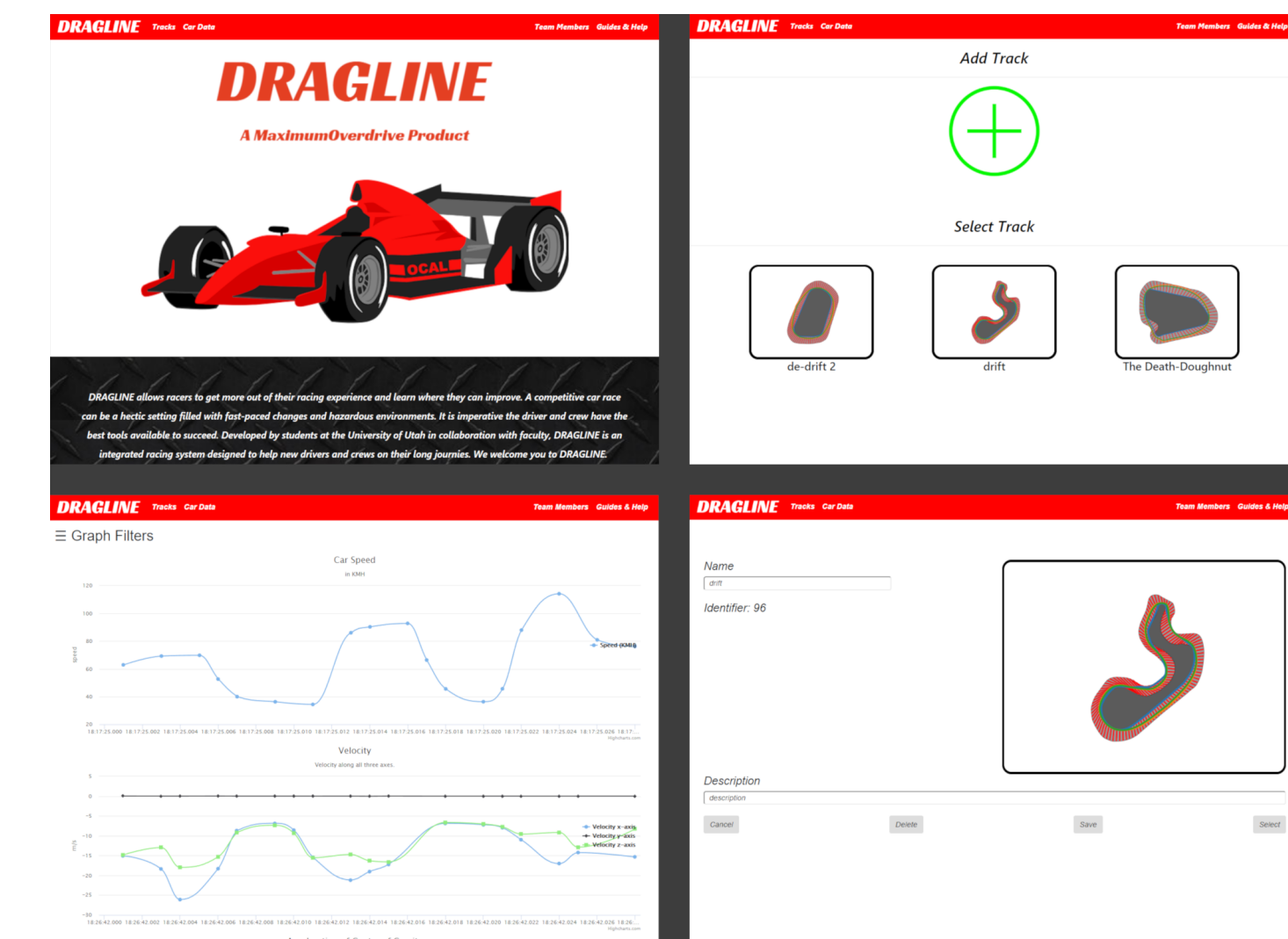
System Architecture

DRAGLINE is a fully integrated software solution that utilizes a large variety of technologies to bring you a seamless experience.

Tech:

Track Mapping

- Drive the Inside.
- Drive the Outside.
- Drive the Center.
- Follow the Optimal Path.
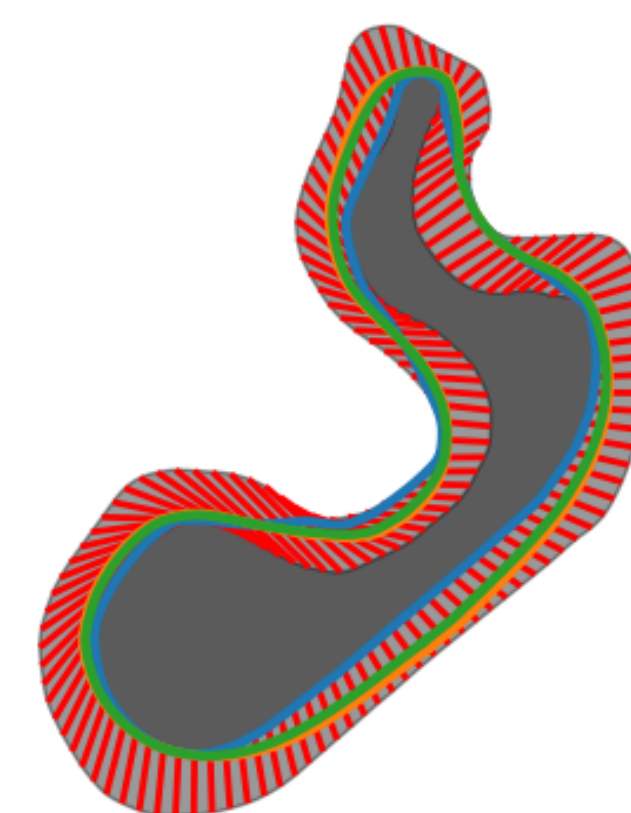- *It's that easy!*

Web Browser Interface

DRAGLINE's web interface works on any device using an up to date web browser.

Augmented Reality (AR)

The user views the generated racing line through an AR interface that updates as they drive around the track.