



AI in Formula One.

Exploring Use Cases For

Aerodynamicists

This content is an independent discussion of AI in motorsports engineering and is not affiliated with Formula One, FIA, or any specific team.

Optimising CFD, Wind Tunnel & Track Correlation

Why It Matters

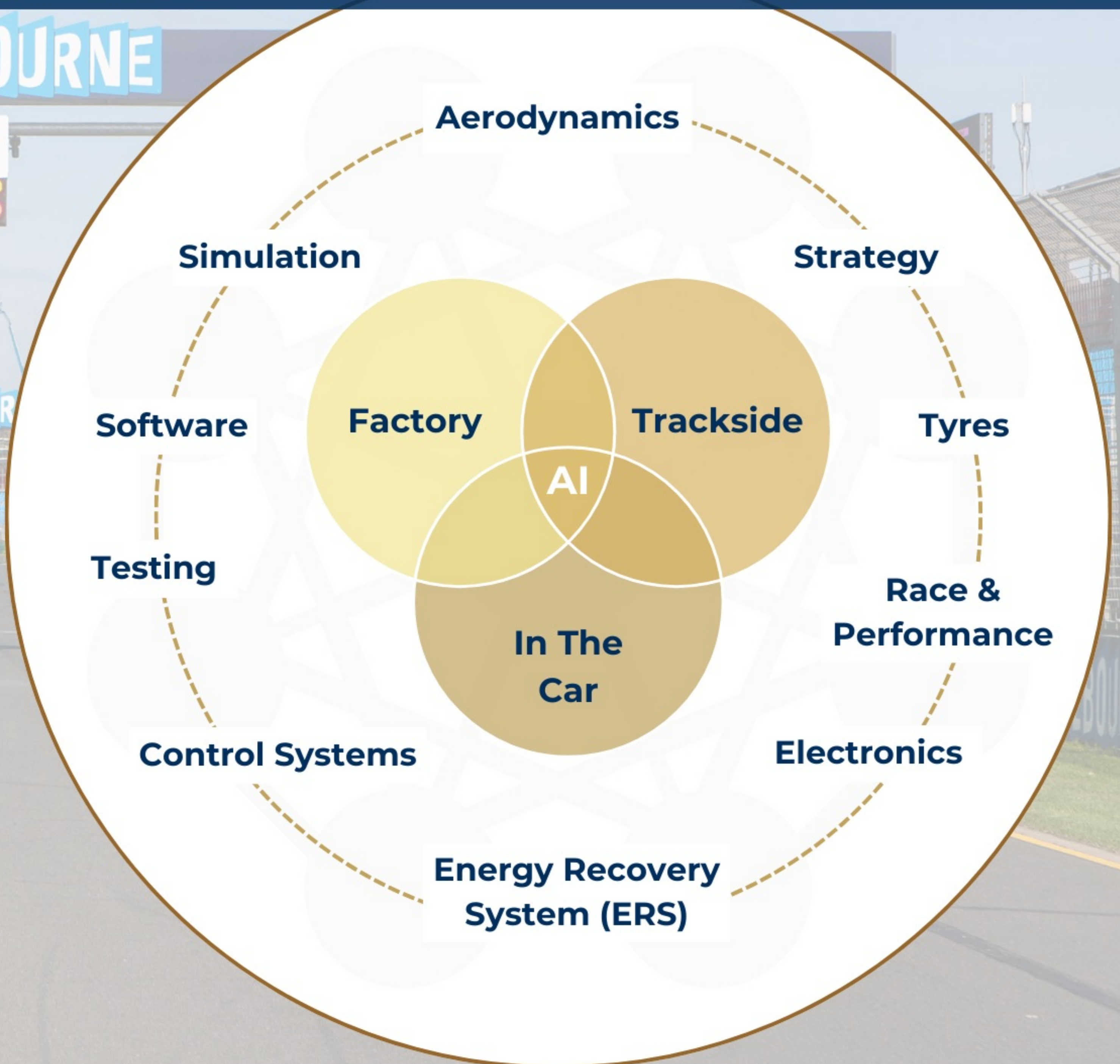
Aerodynamics is one of the most data-intensive areas of Formula One development.

Engineers may run thousands of CFD simulations and wind tunnel tests, but the challenge lies in refining models, correlating data, and optimising test efficiency.

AI-based Engineering Technology

- ✓ Speeds up aerodynamic simulations by optimising input parameters for CFD and wind tunnel testing.
- ✓ Improves correlation between CFD, wind tunnel, and track performance data to enhance accuracy.
- ✓ Identifies airflow trends and inefficiencies that may not be immediately apparent in raw data.

The Future of Racing: Streamlined with AI.

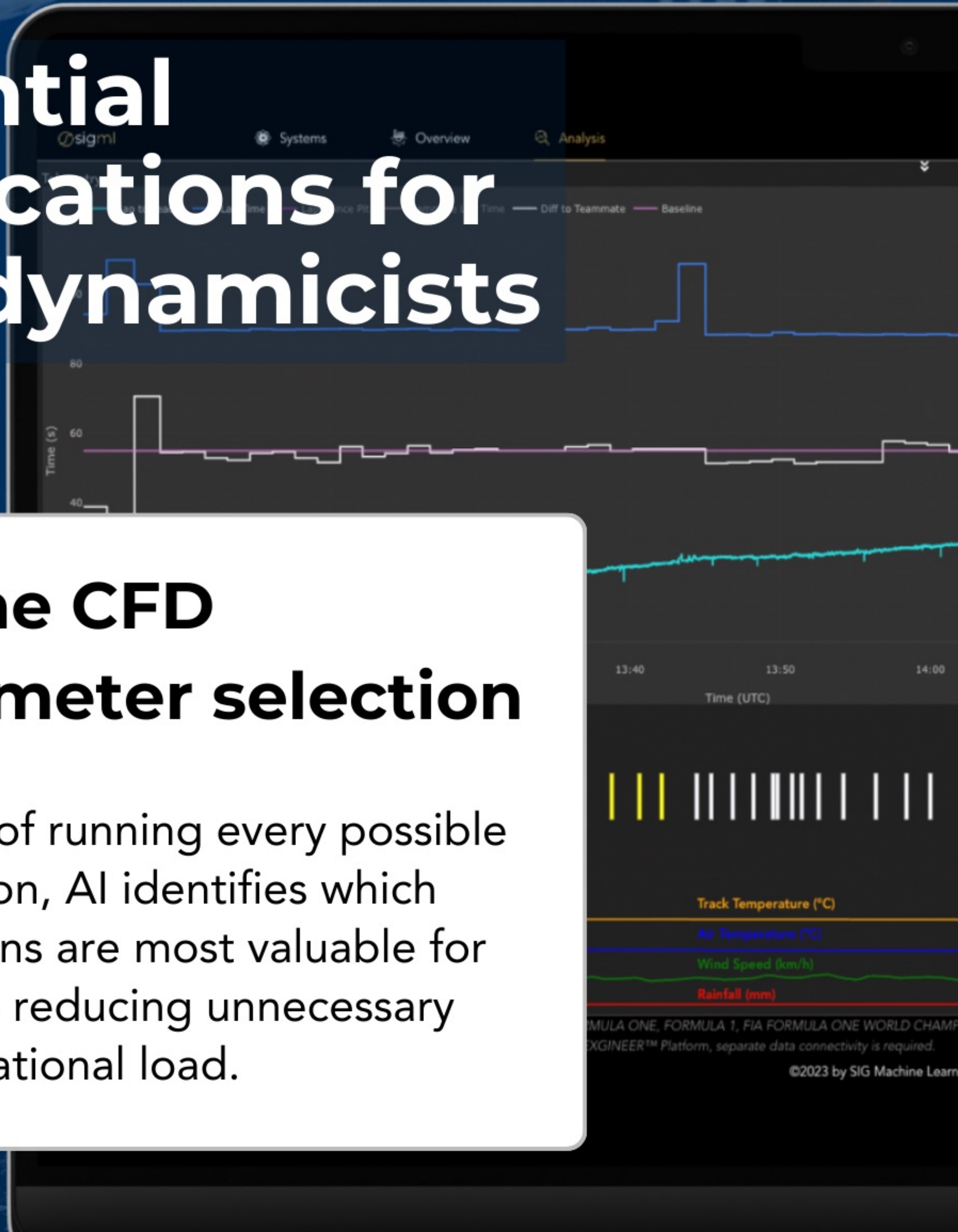


AI in Formula One.
Exploring Use Cases For **Aerodynamicists**

Potential Applications for Aerodynamicists

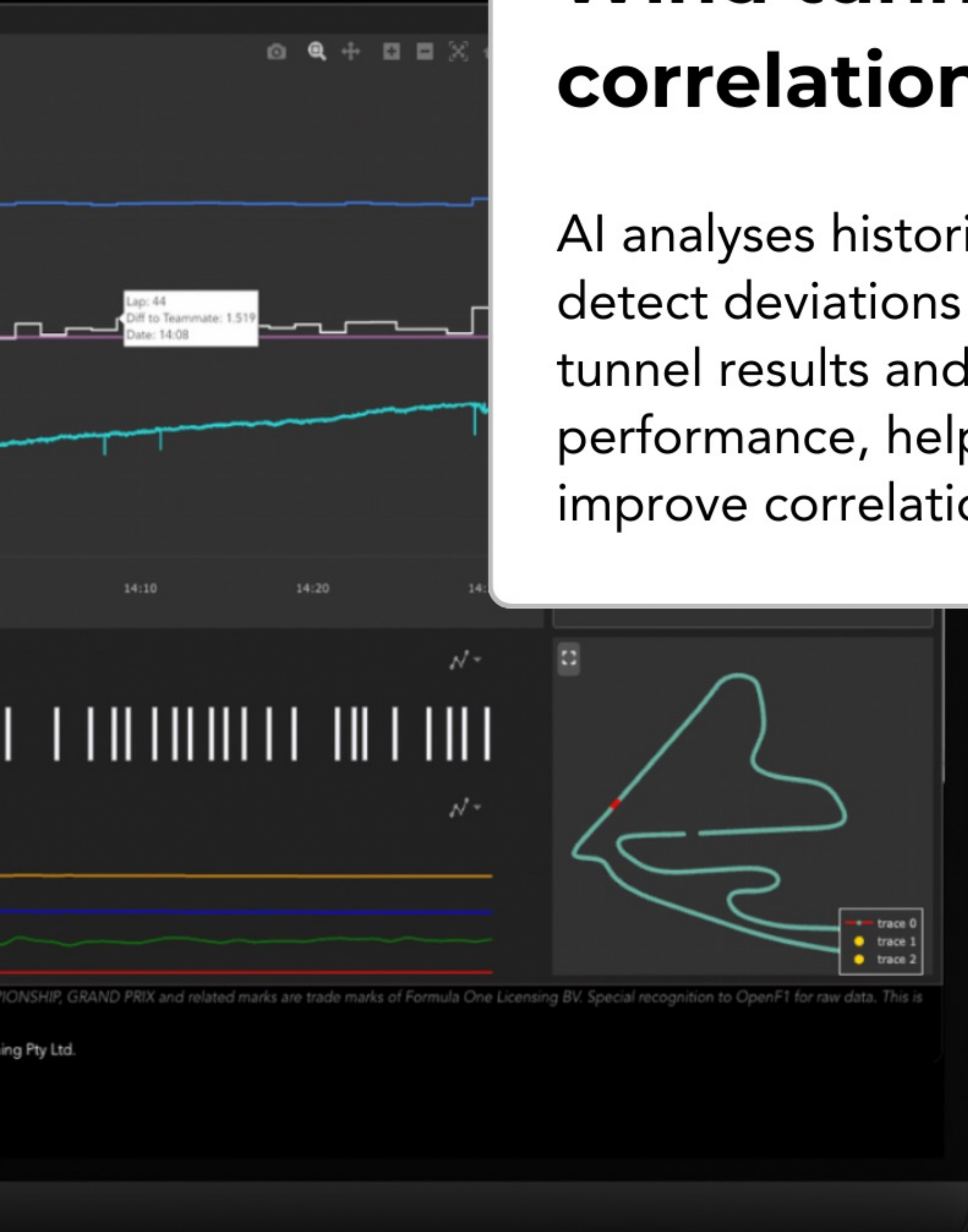
Refine CFD parameter selection

Instead of running every possible simulation, AI identifies which conditions are most valuable for testing - reducing unnecessary computational load.

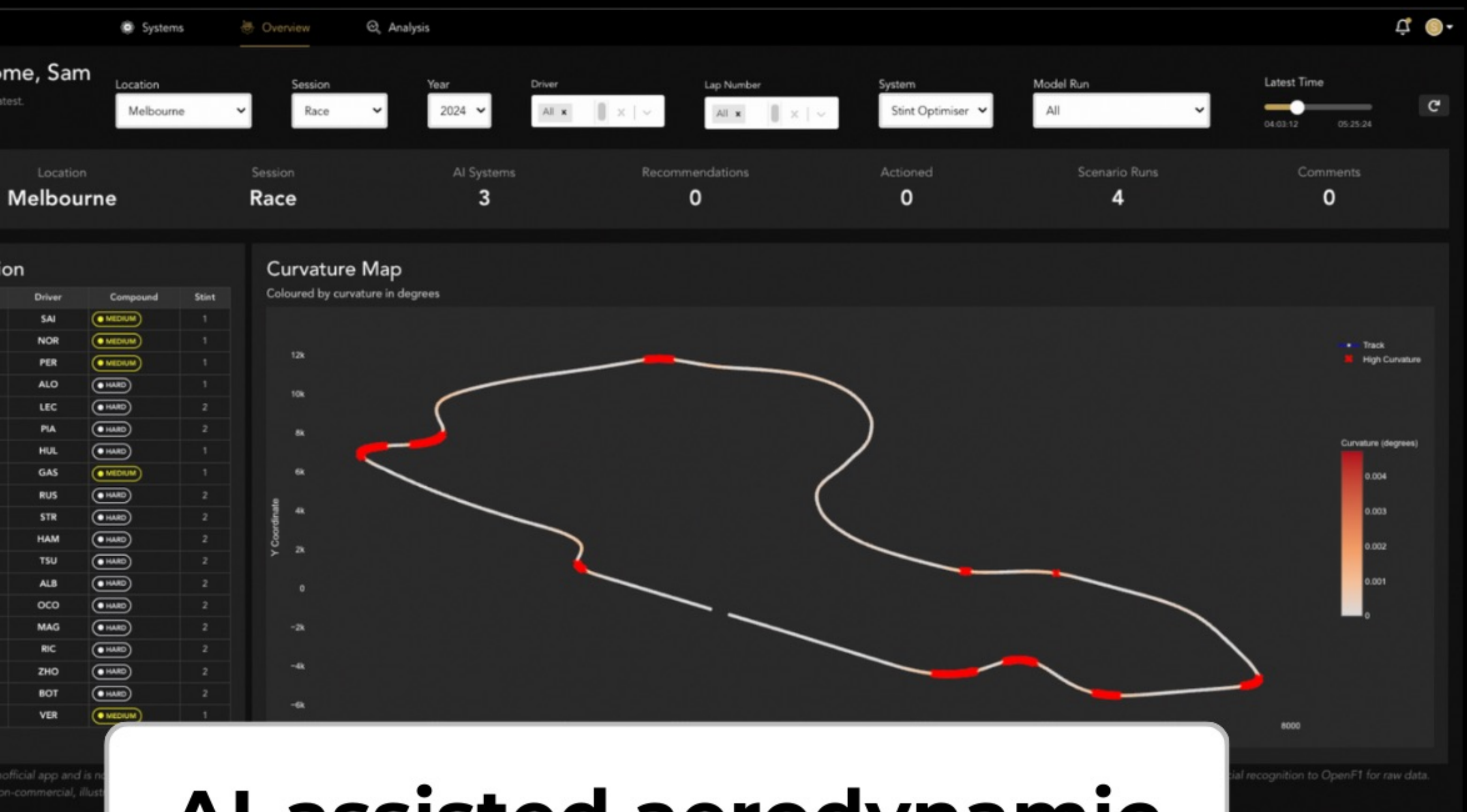


Wind tunnel correlation

AI analyses historical data to detect deviations between wind tunnel results and track performance, helping engineers improve correlation models.



AI in Formula One. Exploring Use Cases For Aerodynamicists



AI-assisted aerodynamic efficiency models

AI assists in predicting drag/downforce trade-offs for different track layouts, helping teams optimise aero configurations faster.

AI isn't replacing expertise - it's enhancing it.

To discuss one or more of these
AI use cases, contact us today.



hello@sigmachinelearning.com



sigmachinelearning.com

Download your **FREE**
copy of the full
AI in Formula One Guide
via the link in the caption.

