

Tracking precise car locations for Formula One

Combining telemetry data to build positioning model for racing line



Goal

Formula One leadership needed to be able to locate its cars on the race track in real time to within a few centimetres. The group had sensor streams of various quality and reliability which needed to be combined into a real-time model.

Insight and Action

QuantumBlack tested two separate probabilistic filtering techniques to combine the sensor streams. Using multiple streams allowed us to consider source reliability, any periodic glitches, and the likely physical behaviour of the car.

Formula One subsequently extended the project to incorporate additional image-derived positioning information.

Results

5 cm

Accuracy target for image processing phase