TRANSFER SOLUTIONS

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Accelerating Analytics!

High Performance Data Analytics in Sport

Name

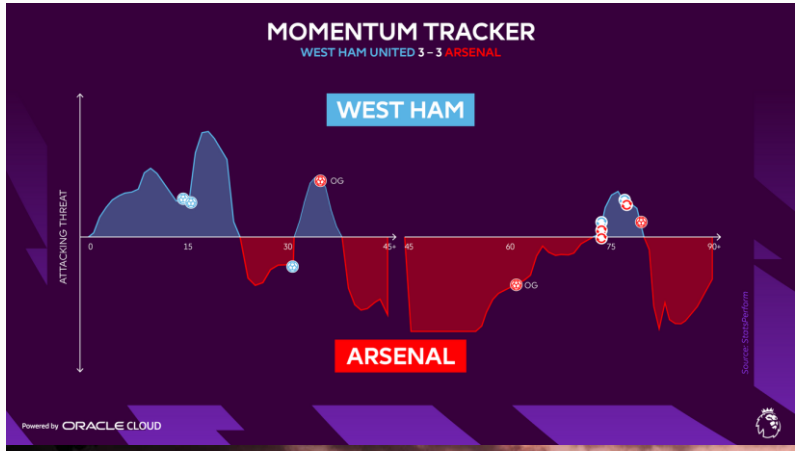
Bob Peulen

Senior Cloud Domain Specialist - Analytics

SailGP

Red Bull Racing

Premier League



SailGP

What challenges are SailGP facing?

Challenge 1	Data Management
Challenge 2	Analytics
Challenge 3	Machine Learning
Challenge 4	Social Interactions

SailGP Explained

Powered by Nature™, SailGP is adrenaline-fueled racing as eight teams go head-to-head in iconic venues across the globe

EIGHT TEAMS //
NINE EVENTS //
EQUAL BOATS //

The winner takes home **$1 million**

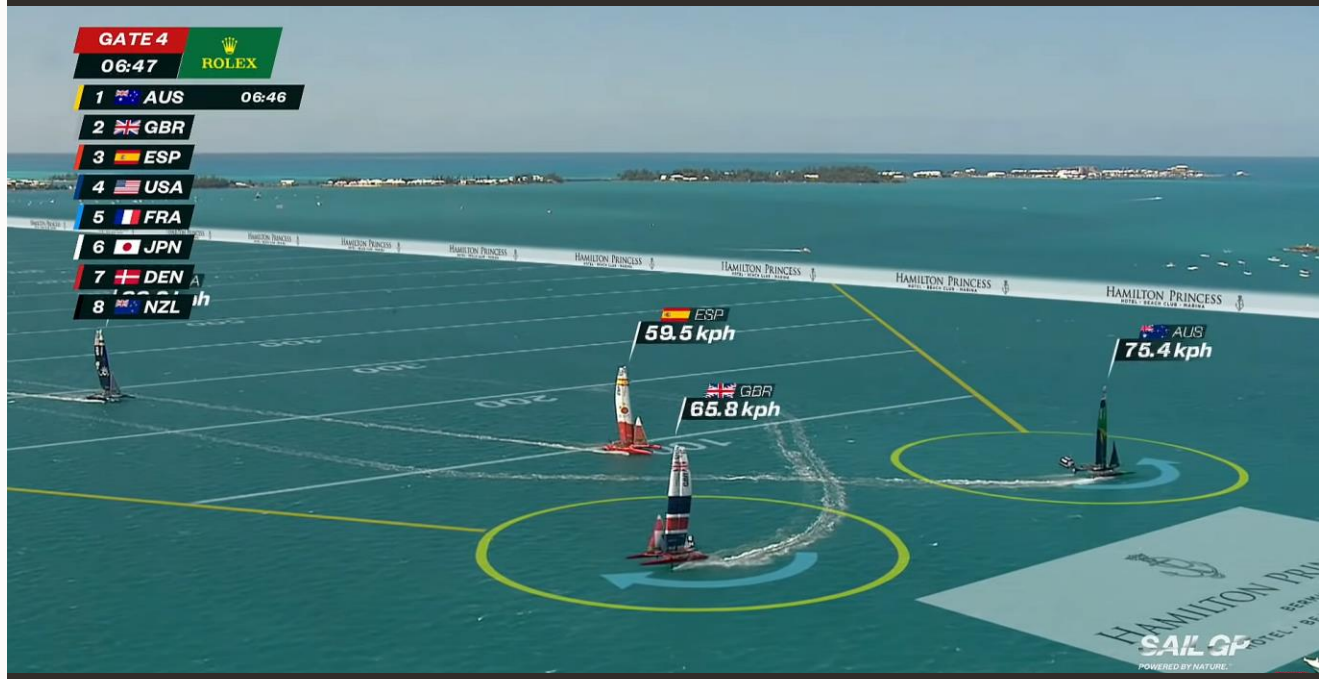
SAILGP

CHALLENGE 1

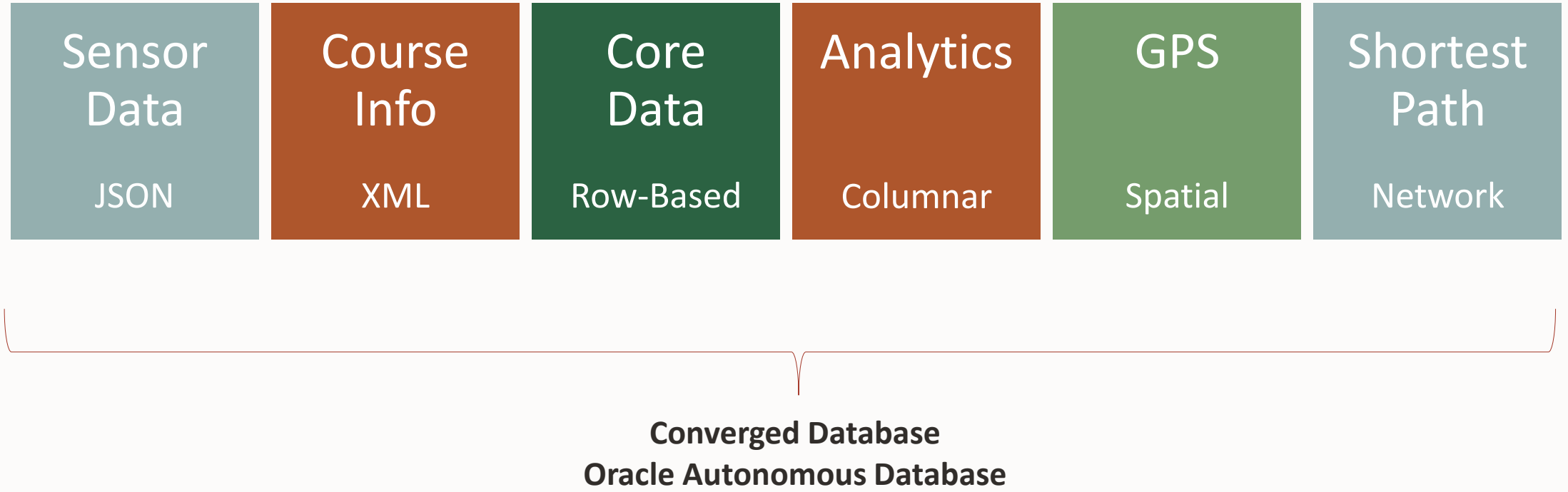
DATA MANAGEMENT

1 day of sailing creates **40BN** rows of data from **thousands** of **sensors**

900 data points per second for each boat



Data Management Solution!



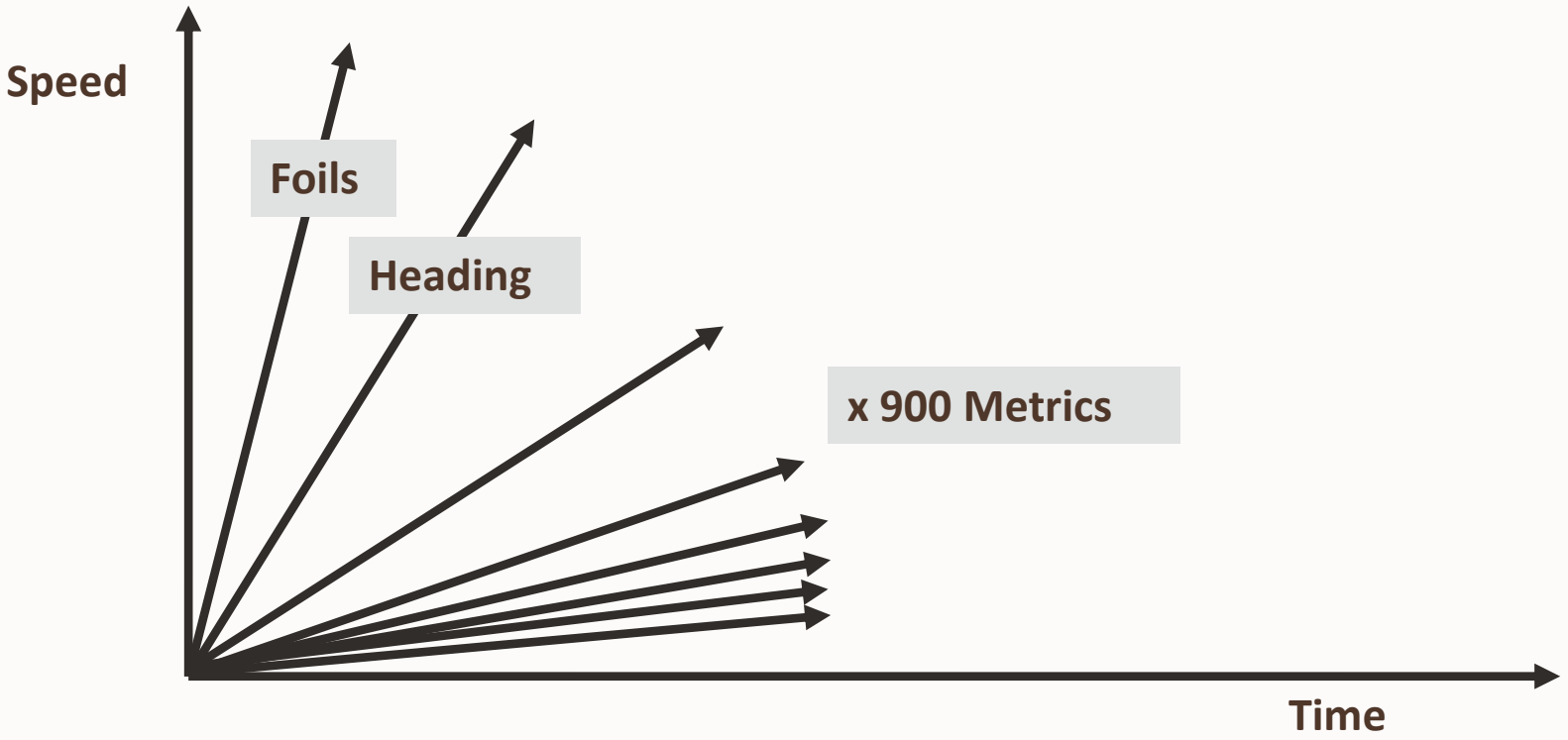
Data Management
Use Case

Great Britain crashes the boat in the Cadiz, Spain Grand Prix while leading the race!

Why?

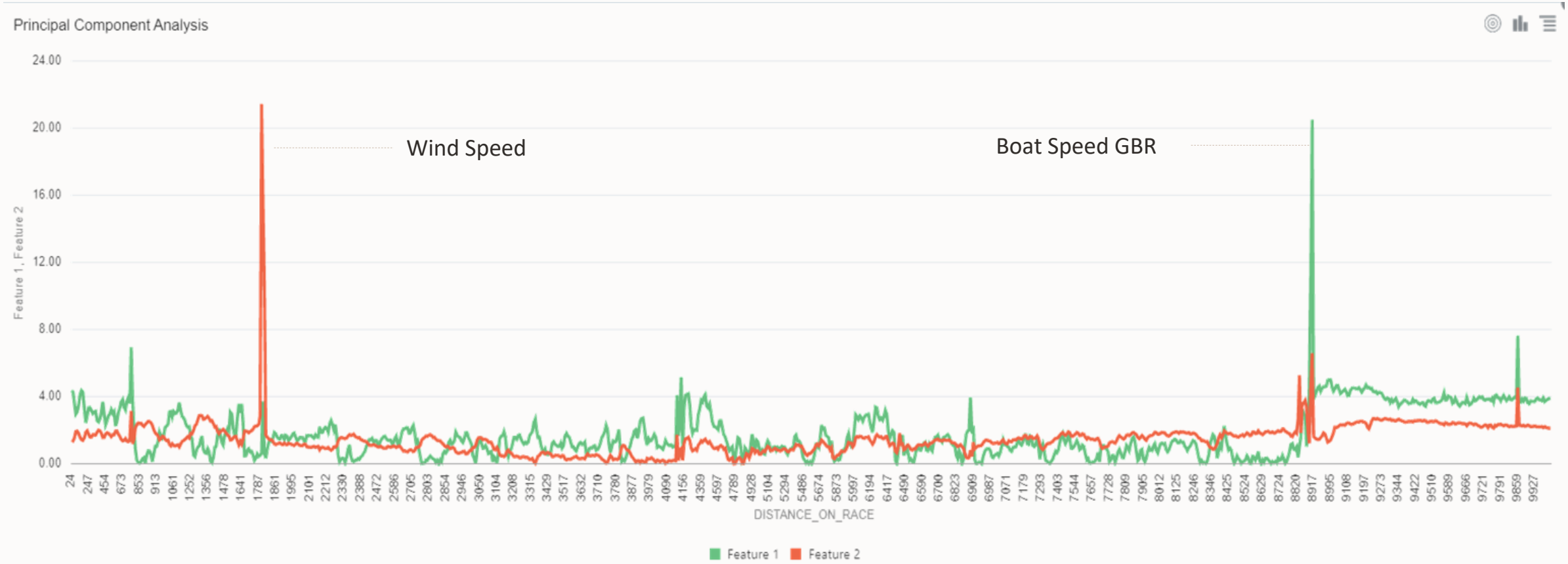
What happened to GBR ?

Each race generates 900 data points per second for each boat



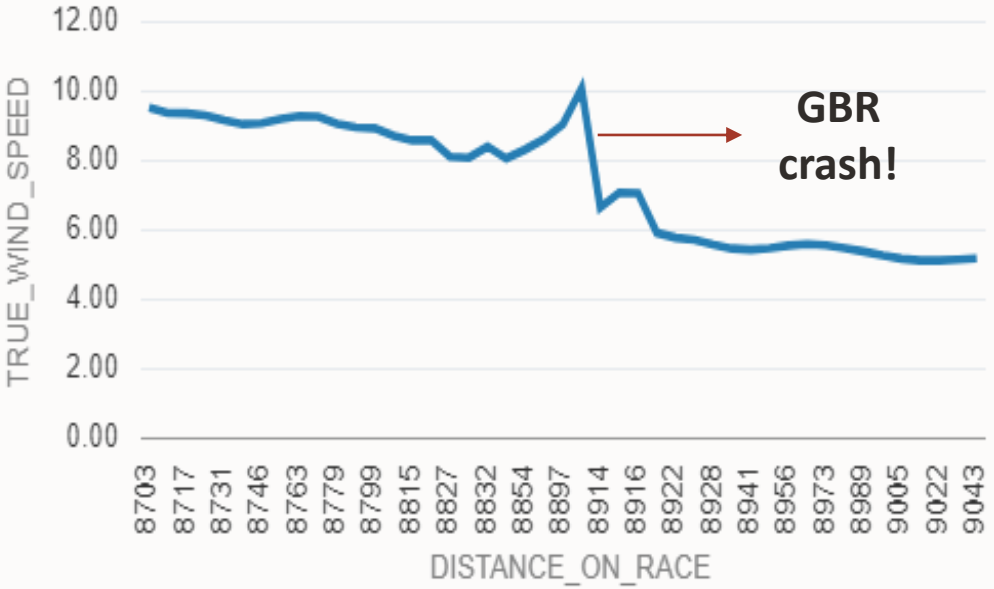
What happened to GBR ?

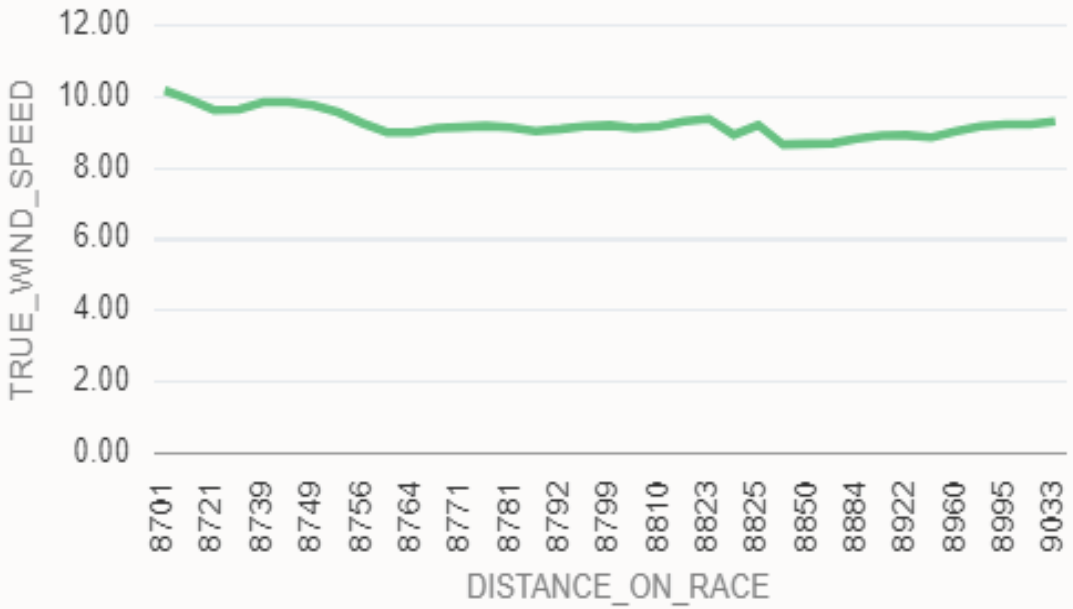
Principal Component Analysis filters 900 dimensions down to 2



What happened to GBR ?

Wind Speed





CHALLENGE 2

SAILGP

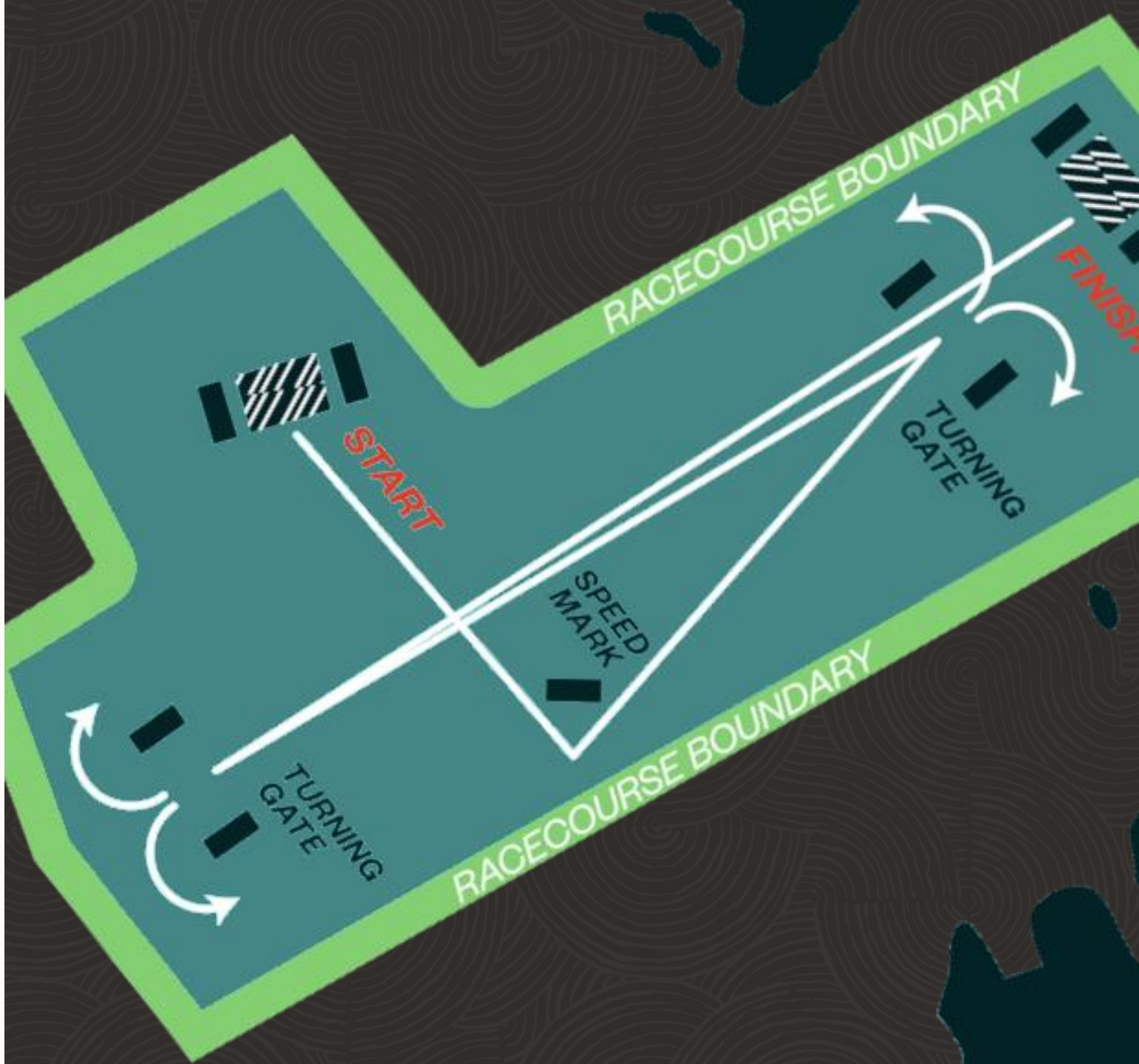
ANALYTICS

Converting 900 data points per **second** for each boat into real time **analytics**

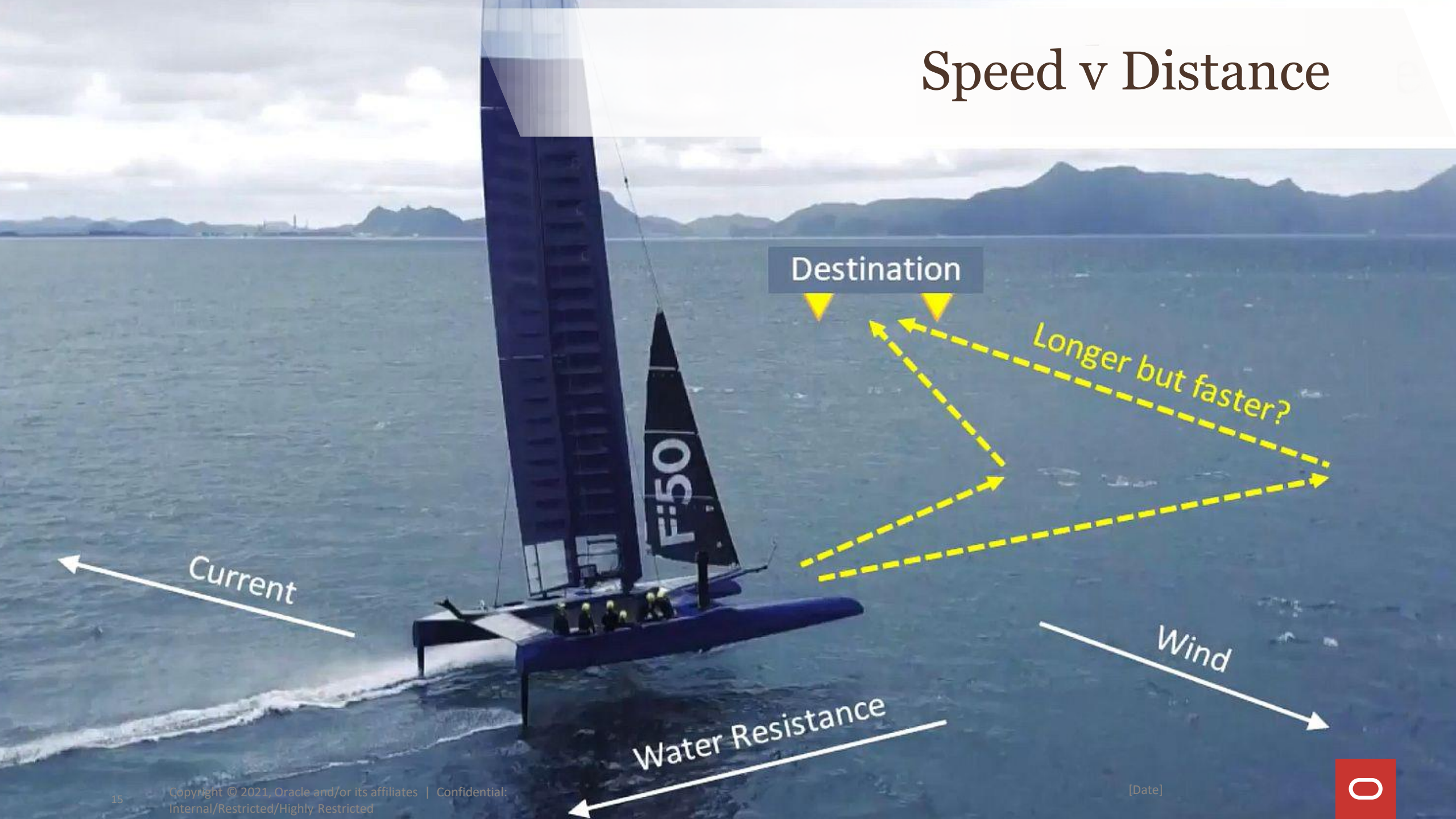
Sail GP Race Track

Starting procedure:

Cross an imaginary line between two points with maximum speed, after the starting signal of the race



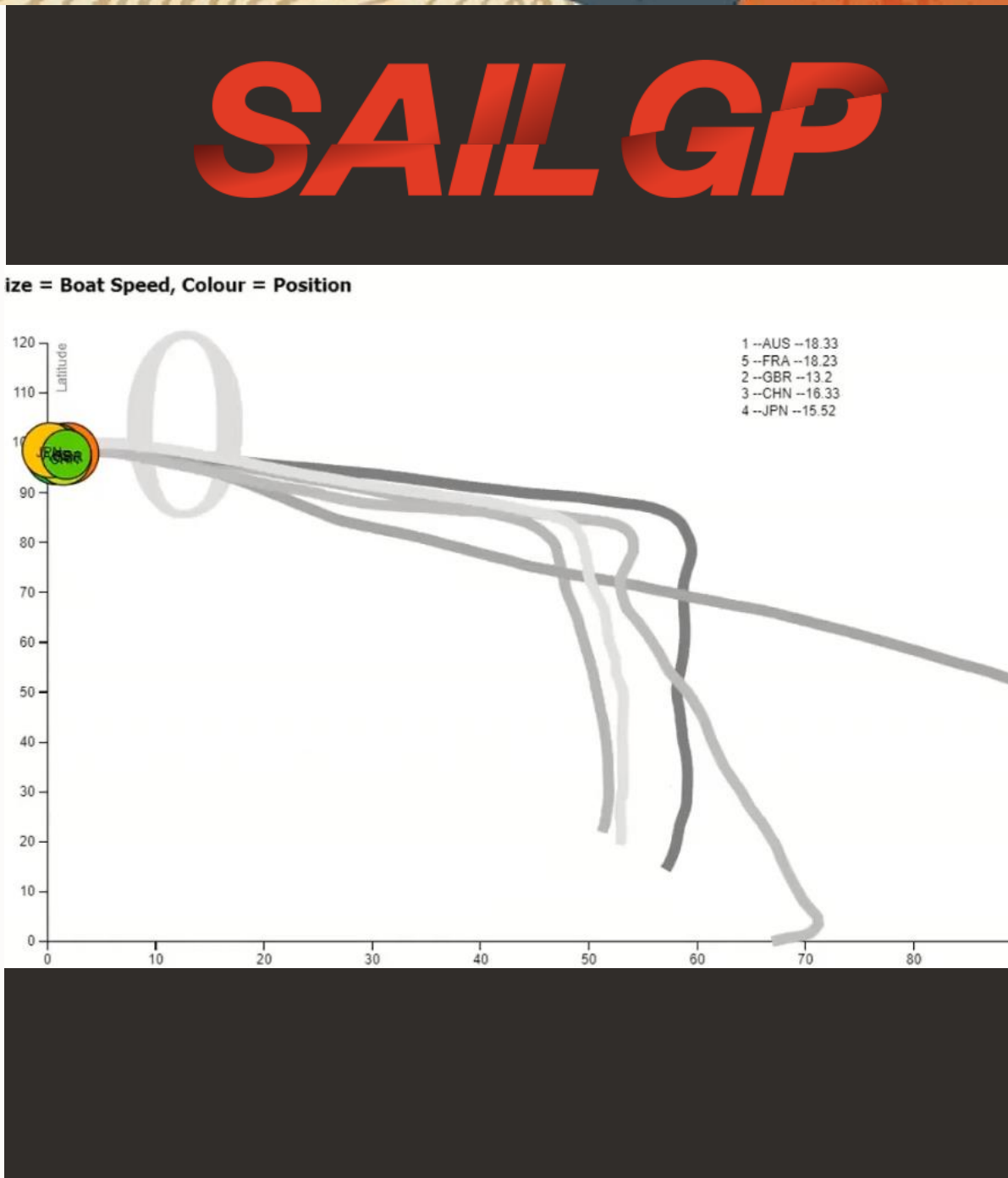
Speed v Distance



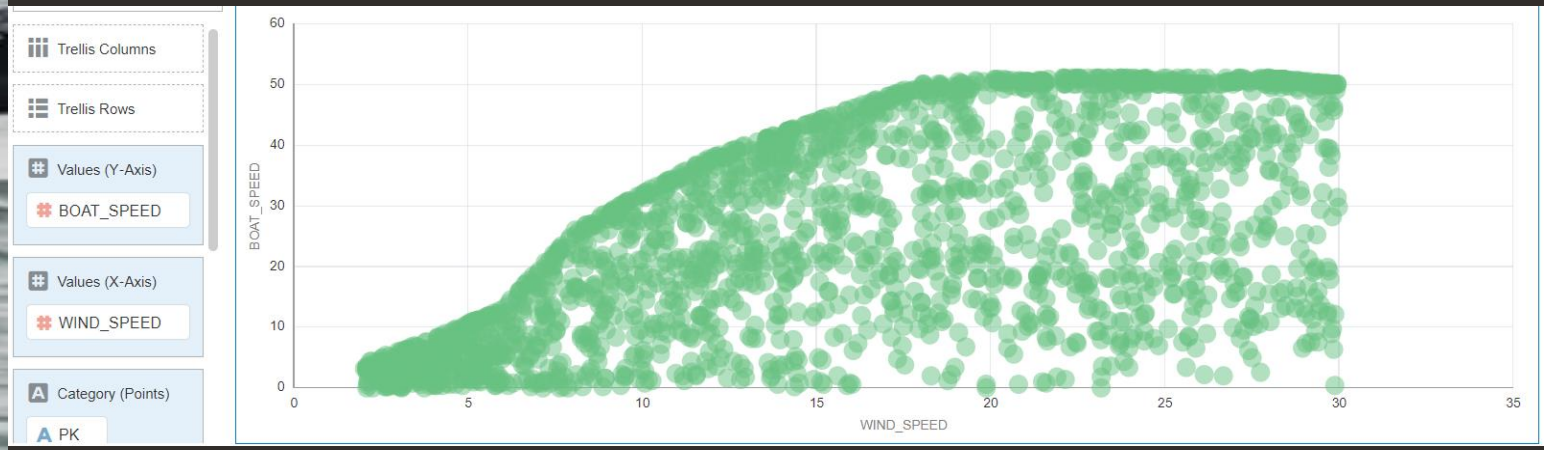
Analytics
Use Case

Different routes &
corners result in different
speed & positions

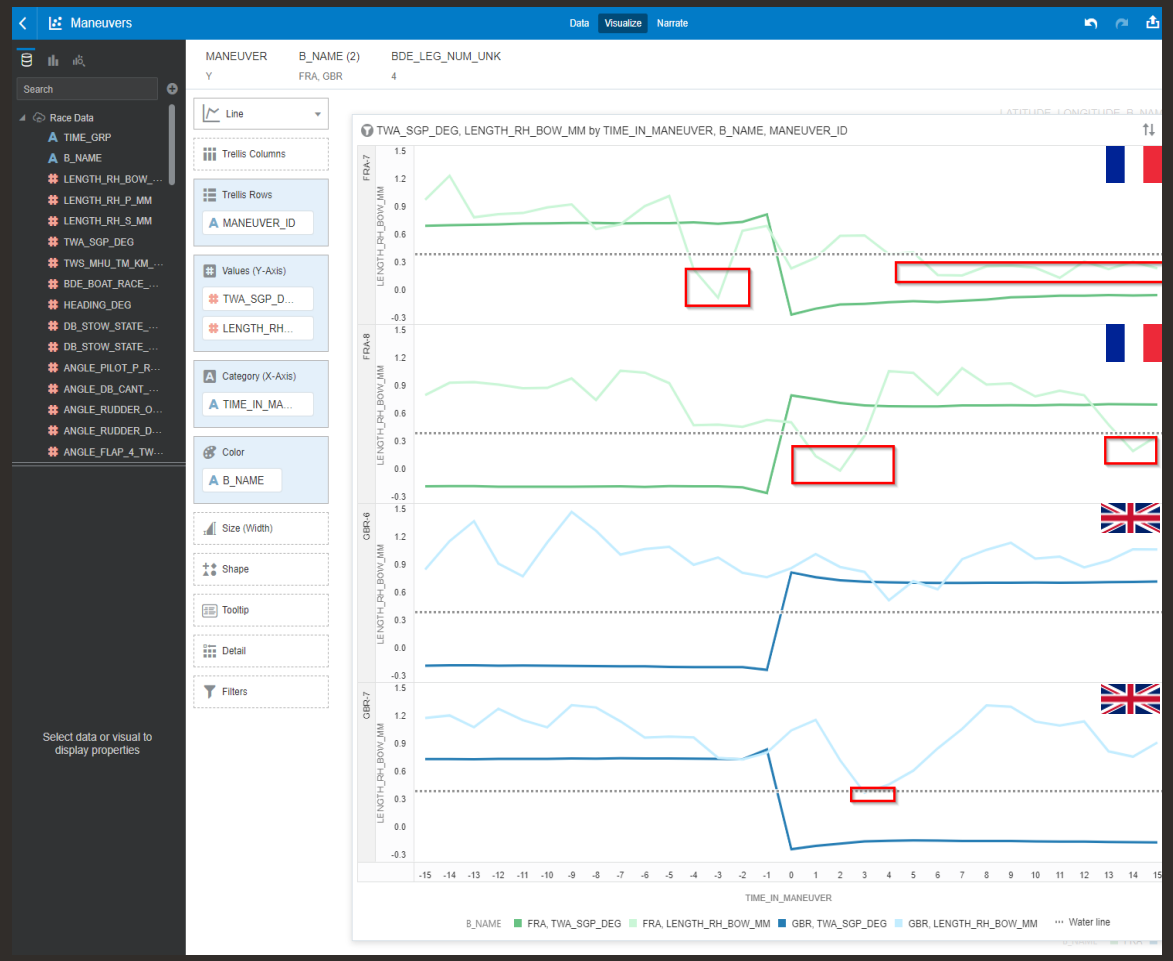
Which route to take?



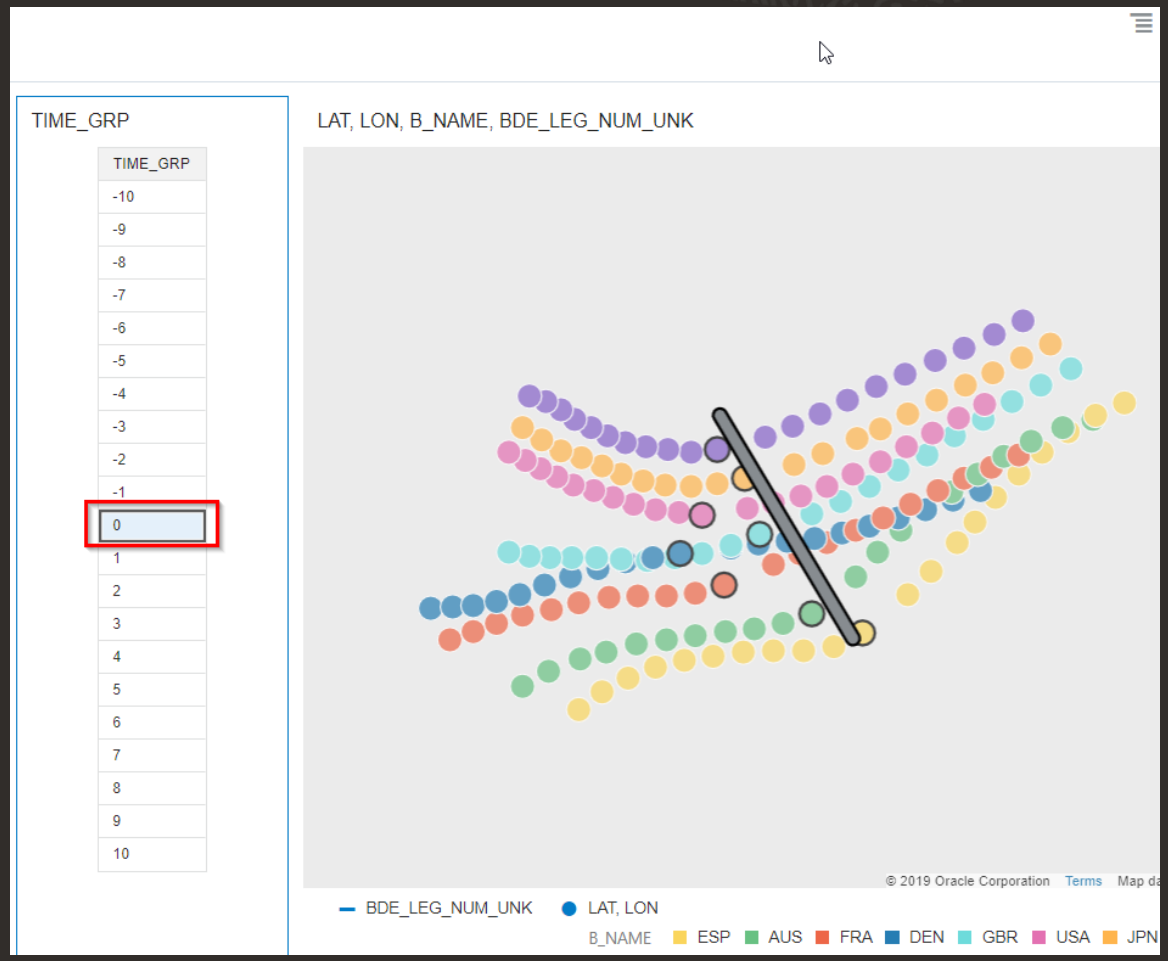
SailGP Team Australia breaks 50 knots / 93 kmh



When changing directions, when are we foiling again?



Rolling start – how did we perform vs the rest?



Foiling

Wind Angle


FRA
GBR
JPN
AUS
USA
DEN
ESP
START

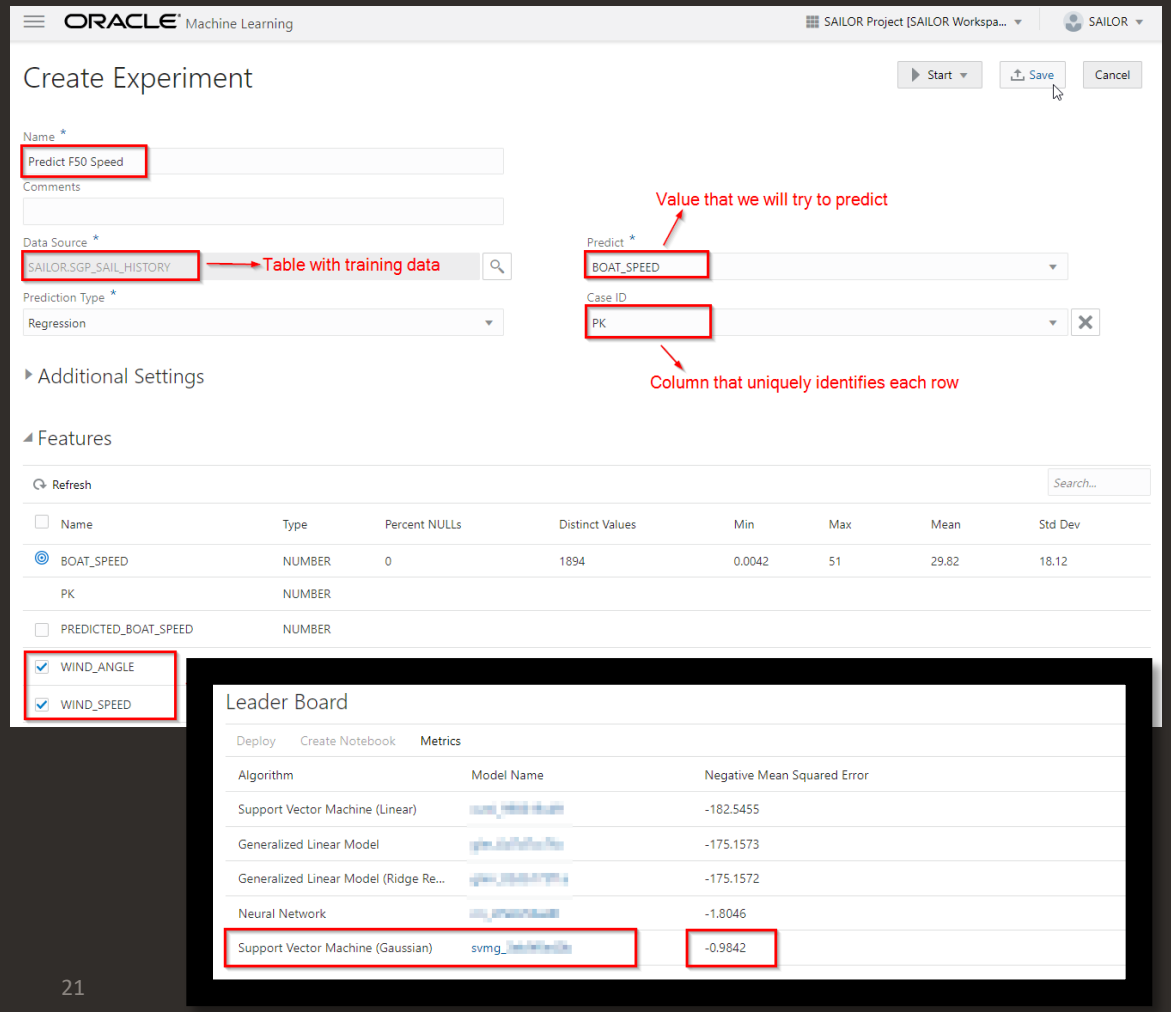
CHALLENGE 3

SAILGP

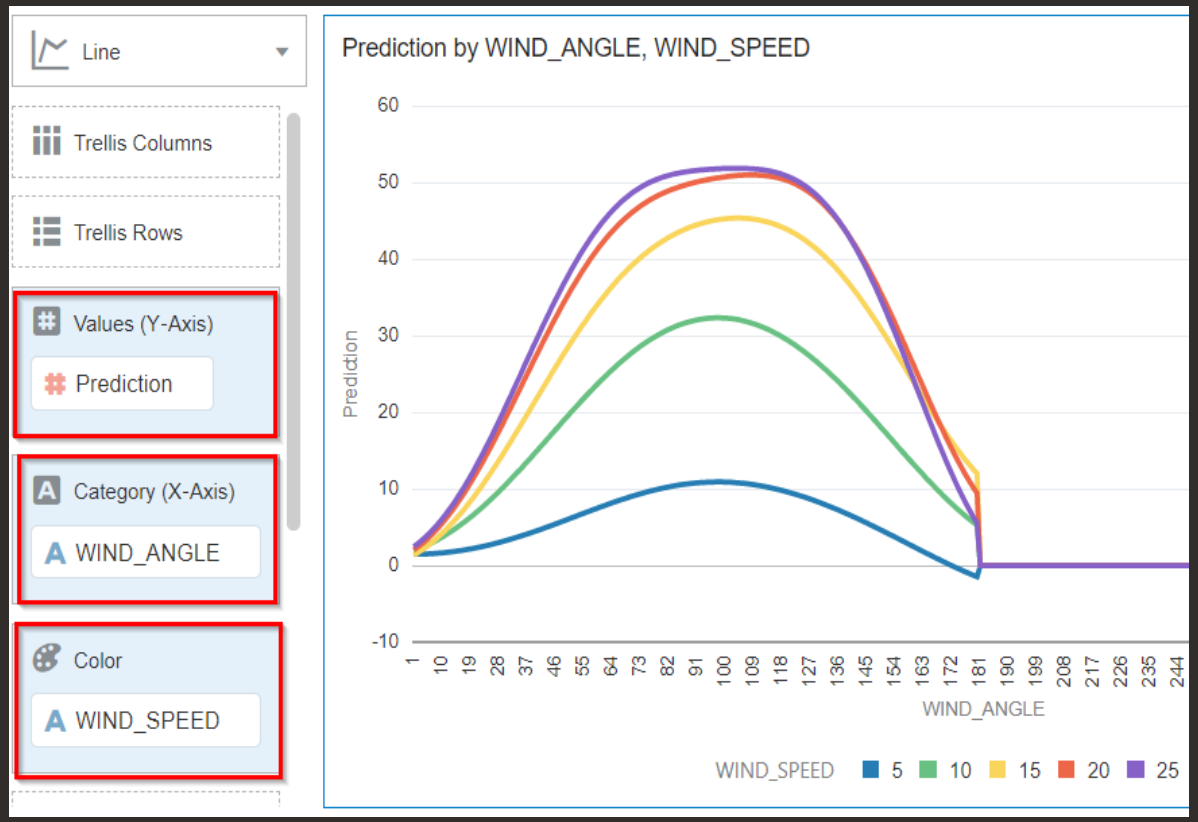
MACHINE LEARNING

Predicting optimal **boat speed** and the **optimal course** to take!

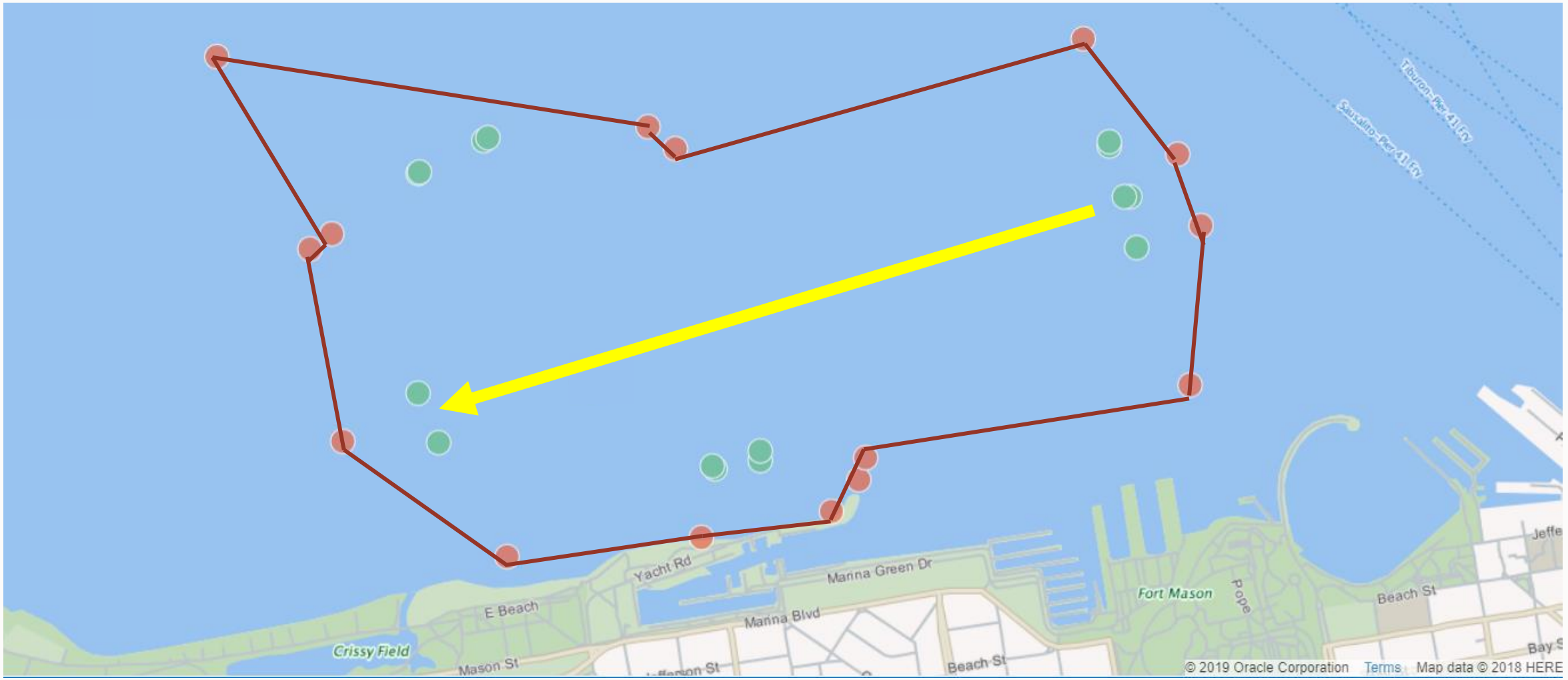
Predicting Boat Speed using Machine Learning!



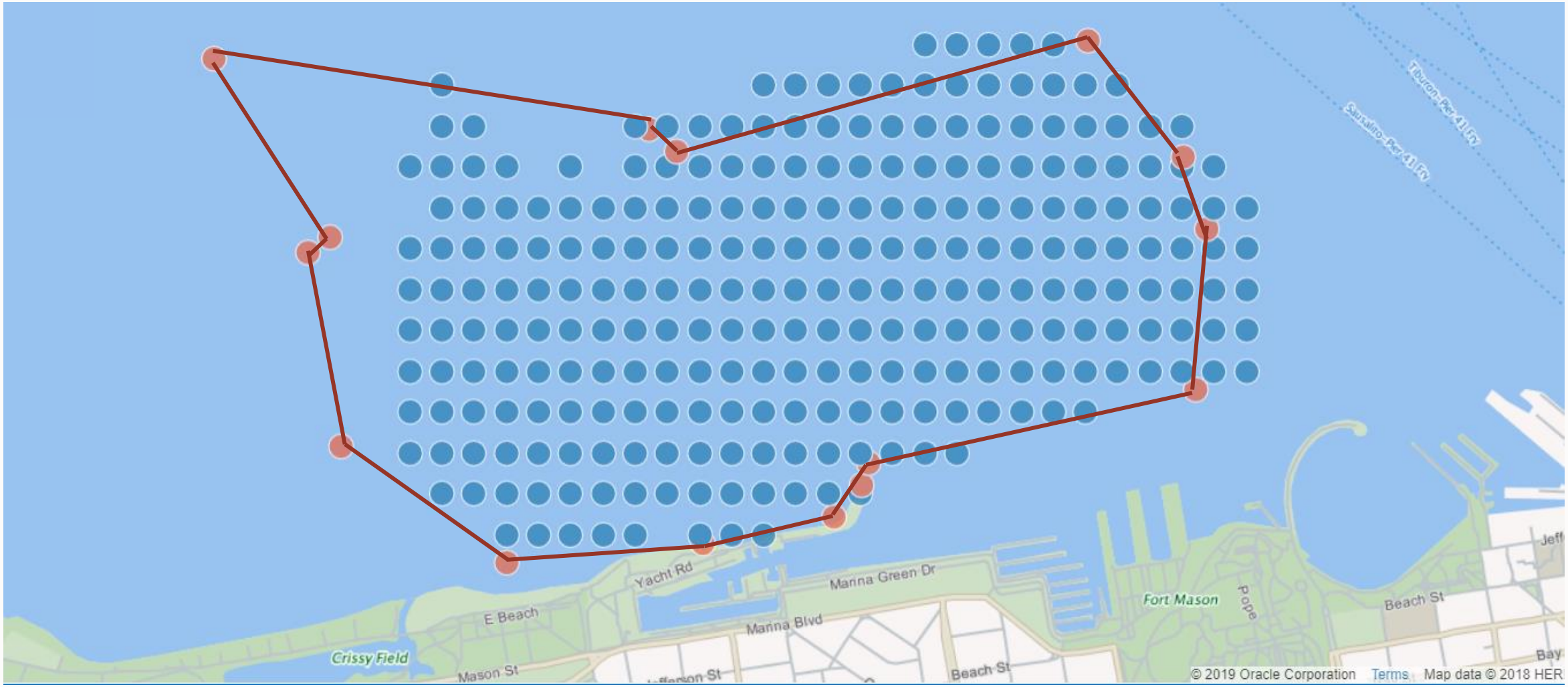
Applying Machine Learning to determine next step!



Predict the optimal course - “The Ghost Boat”

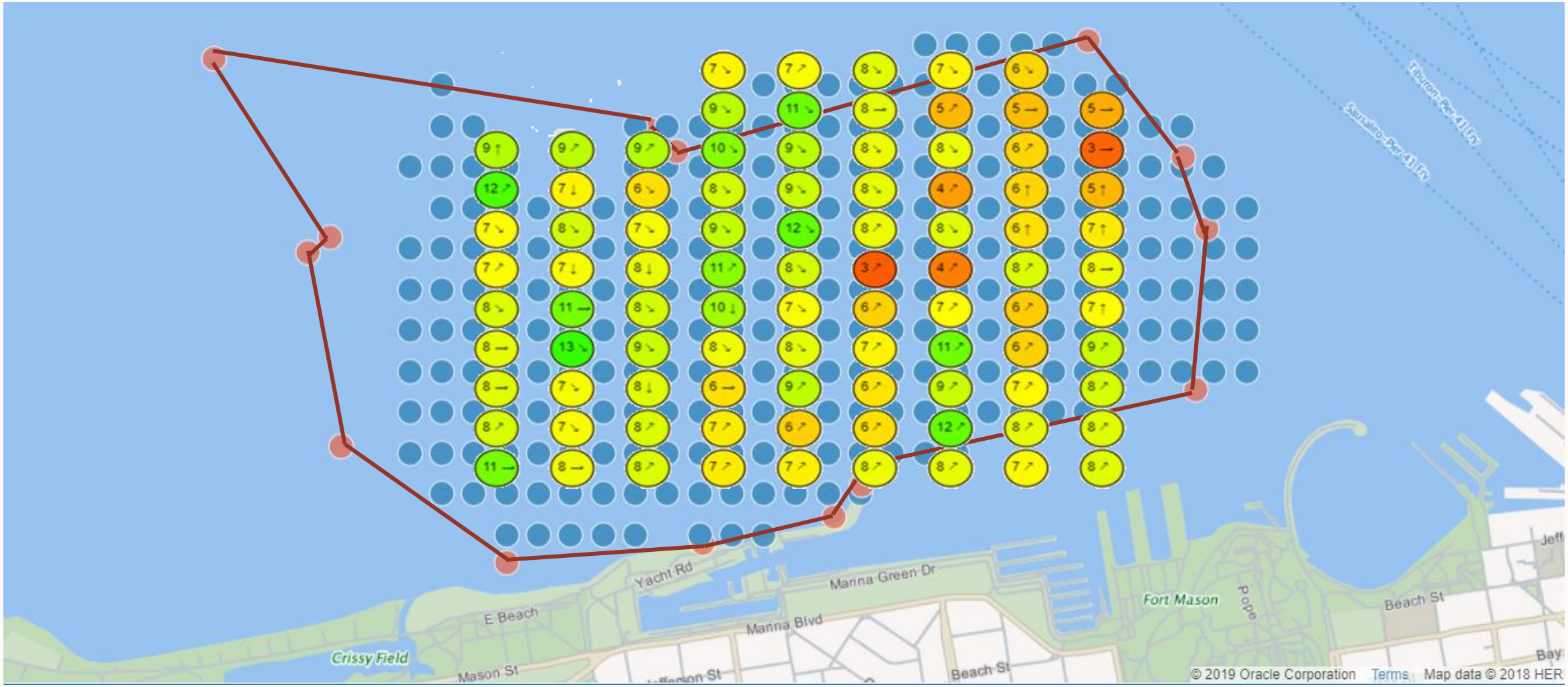


Divide the course into a Spatial Grid



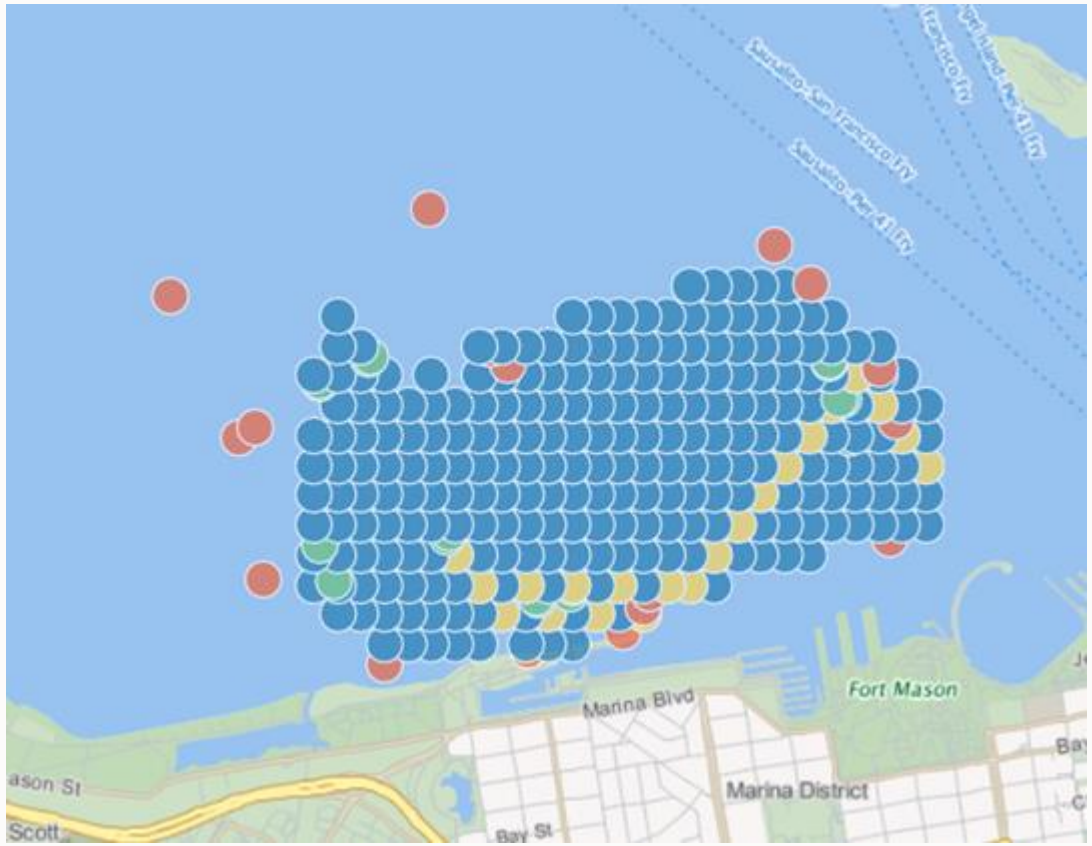
Overlay Wind Speed + Direction

Using Data from all Boats

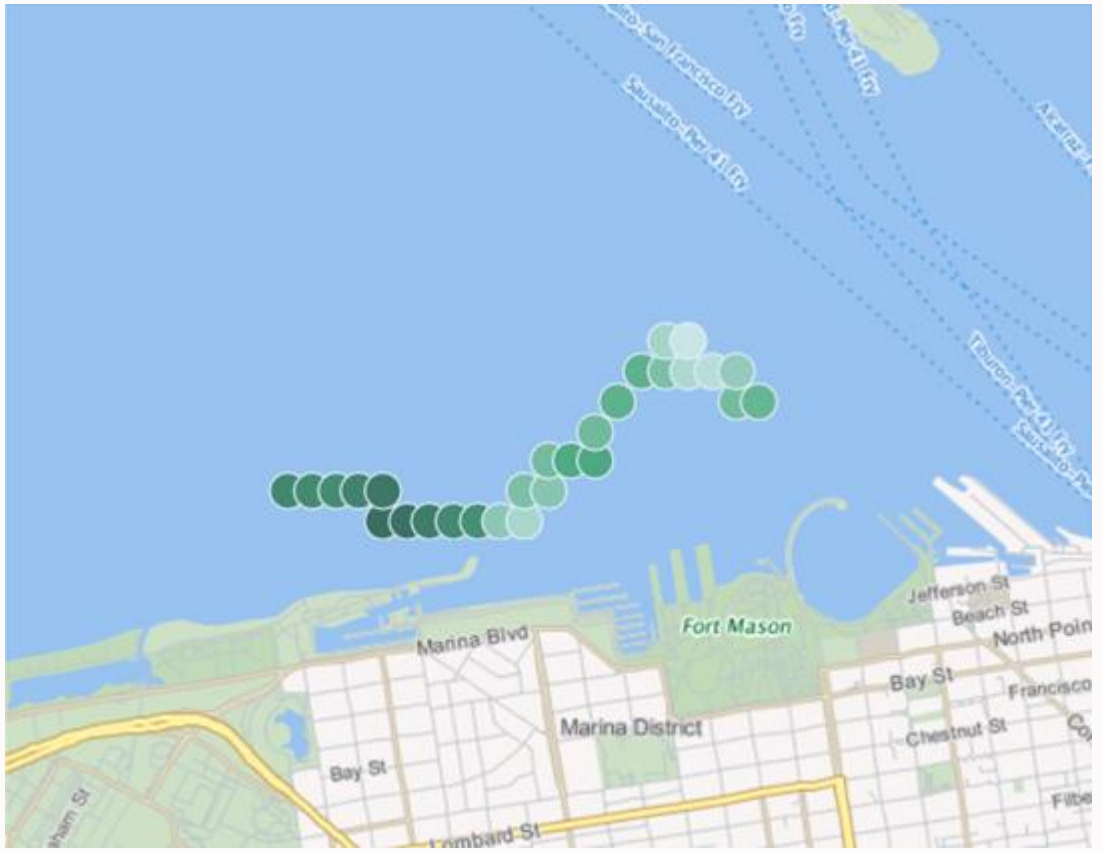


Compare with actual course taken

Optimal Course

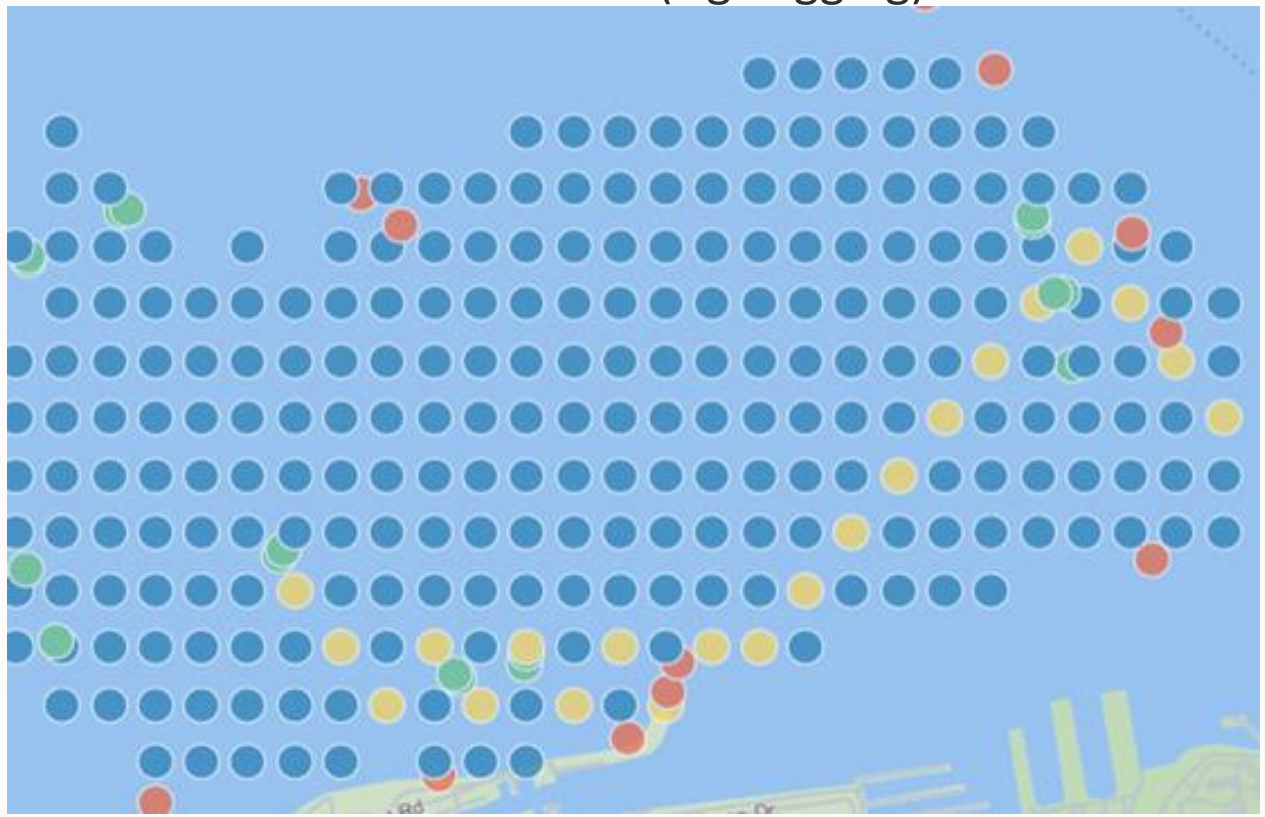


Actual Course

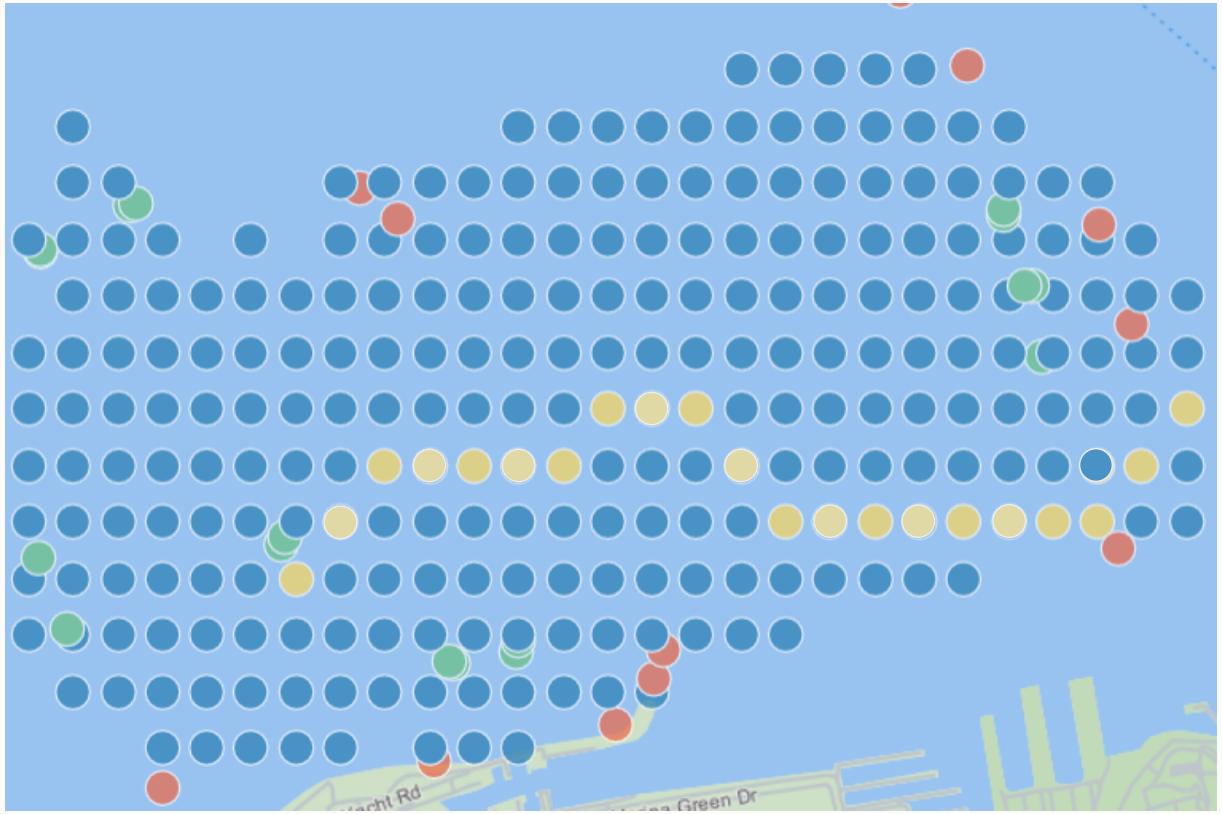


Ghost Boat model

Version 1.0 (zig-zagging)



Version 2.0



CHALLENGE 4

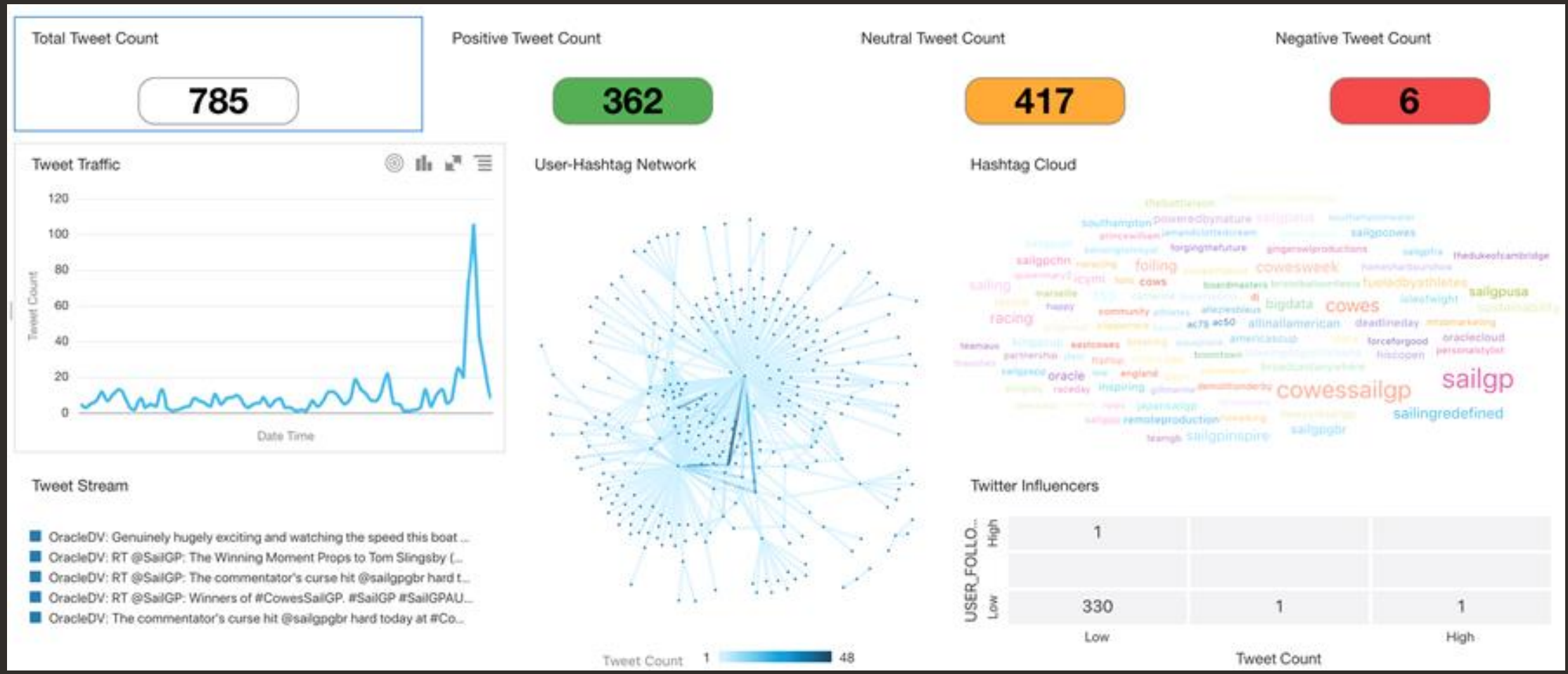
SOCIAL INTERACTION

Social Media Analysis and real time analytics for all viewers!

SAILGP

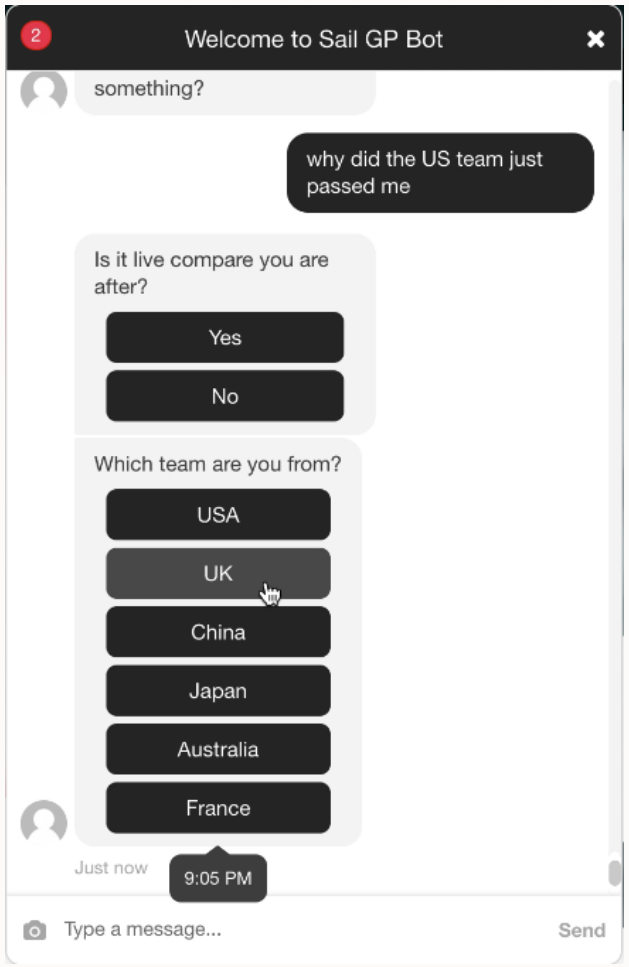
SAILGP

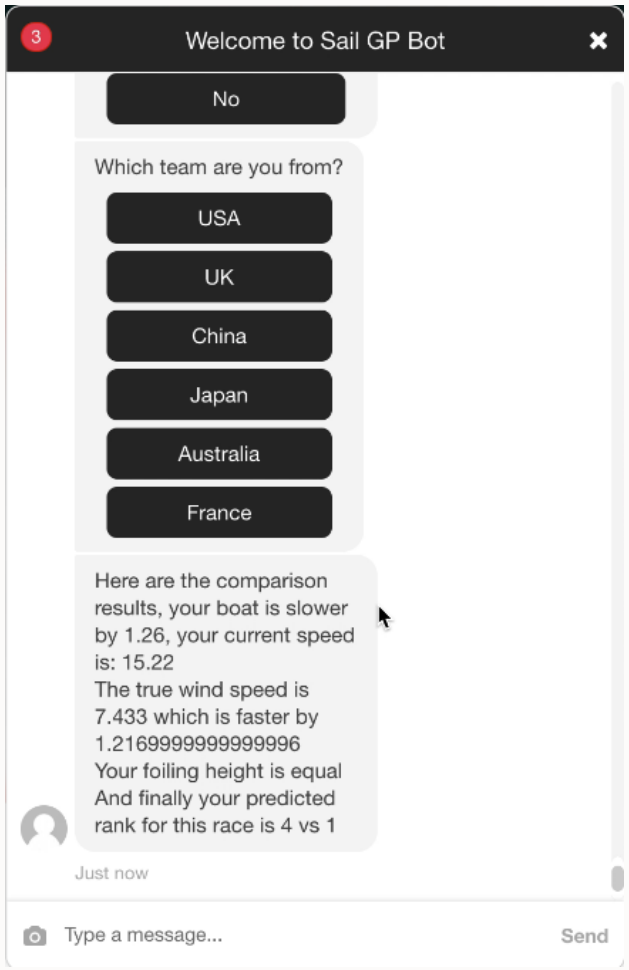
Social Media Analysis



Digital Assistant V2.0 – “Talk to the Boat”

Ask the Boat for Performance Stats, Competitive Info etc

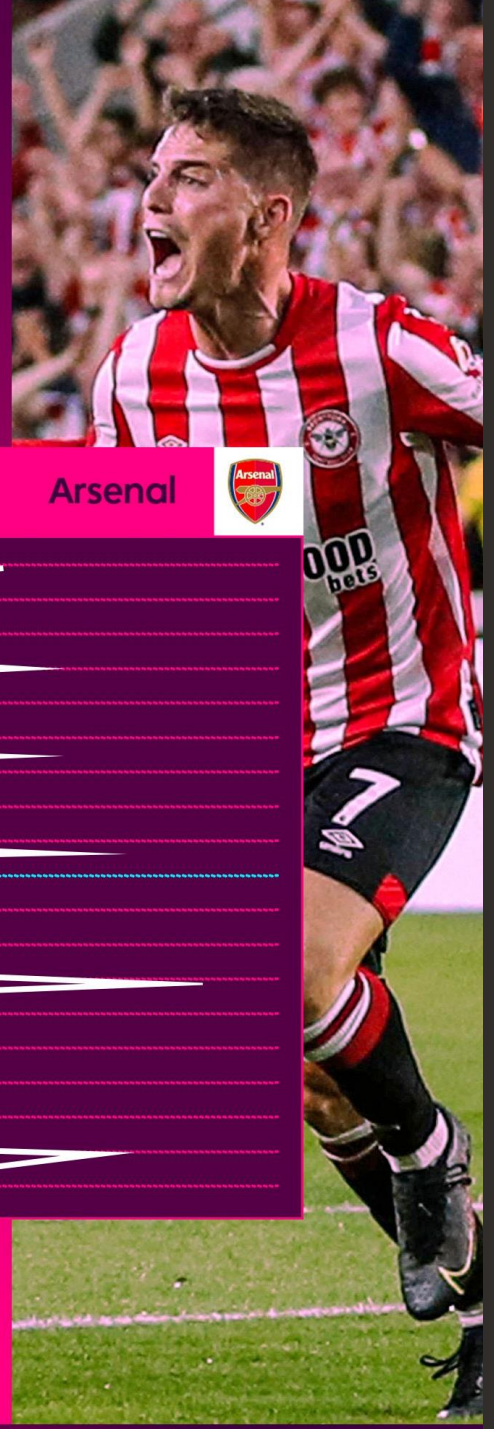





Premier League
ORACLE
Introducing:
Match Insights—
Powered by Oracle Cloud

ATTACKING THREAT

Powered by ORACLE CLOUD

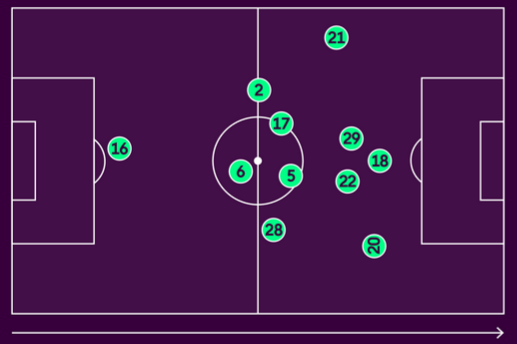


Brentford 2-0 Arsenal

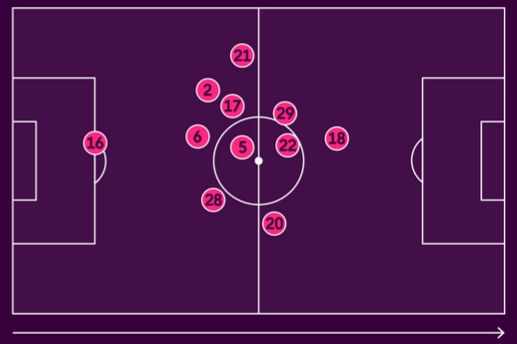
CHELSEA AVERAGE POSITION

CHELSEA 0 – 0 WOLVES

IN POSSESSION



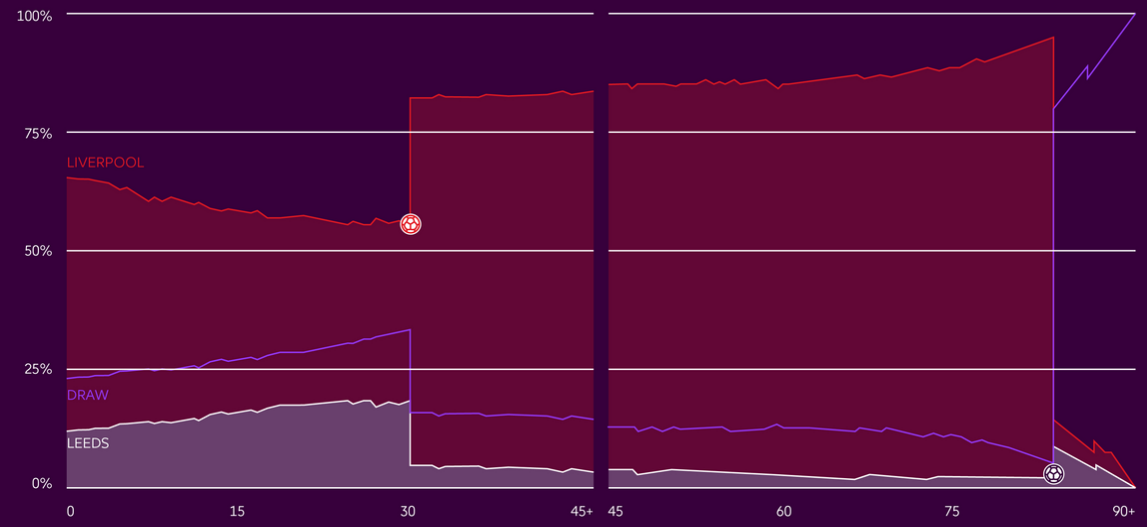
OUT OF POSSESSION



Source: StatsPerform

WIN PROBABILITY

LEEDS UNITED 1 – 1 LIVERPOOL



Source: StatsPerform

Powered by ORACLE CLOUD


Red Bull RACING
ORACLE
A Partnership Driven By Data

A Complete and Integrated Data & AI Platform

Replication
OCI GoldenGate Cloud

Data Integration
OCI Data Integration

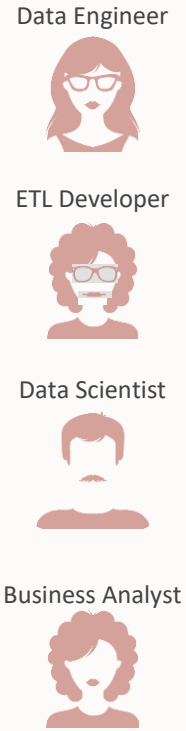
Streaming
OCI Streaming

Artificial Intelligence
OCI AI Services

Data Science
OCI Data Science

Machine Learning
Oracle ML

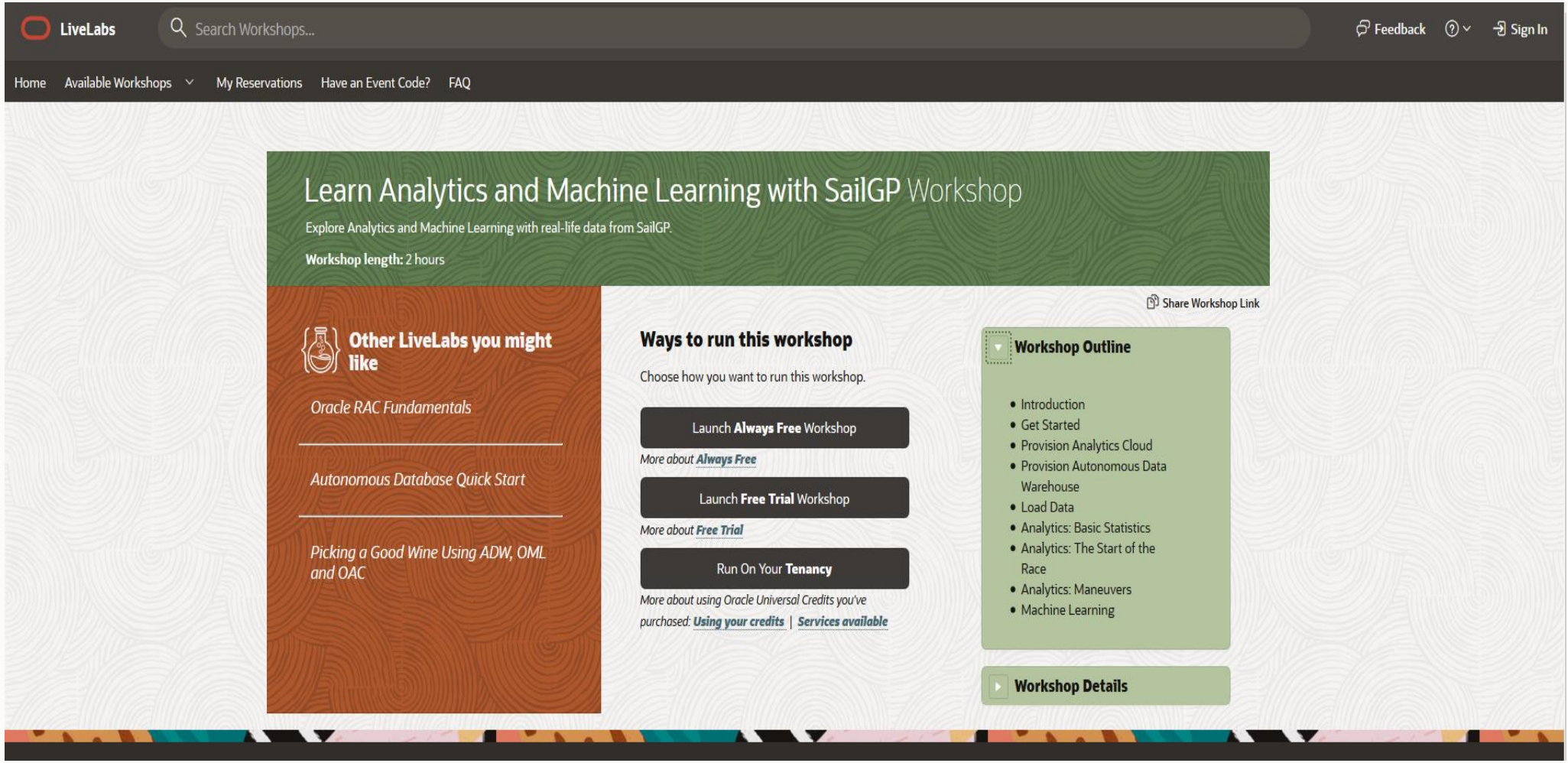
Analytics
Oracle Analytics Cloud



Oracle Cloud Infrastructure

- Bare Metal Servers
- Virtual Machines
- Load Balancers
- VPN
- Virtual Cloud Networks
- Block storage
- Object / Archive
- File
- Backup

Try it Yourself with Oracle Livelabs

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