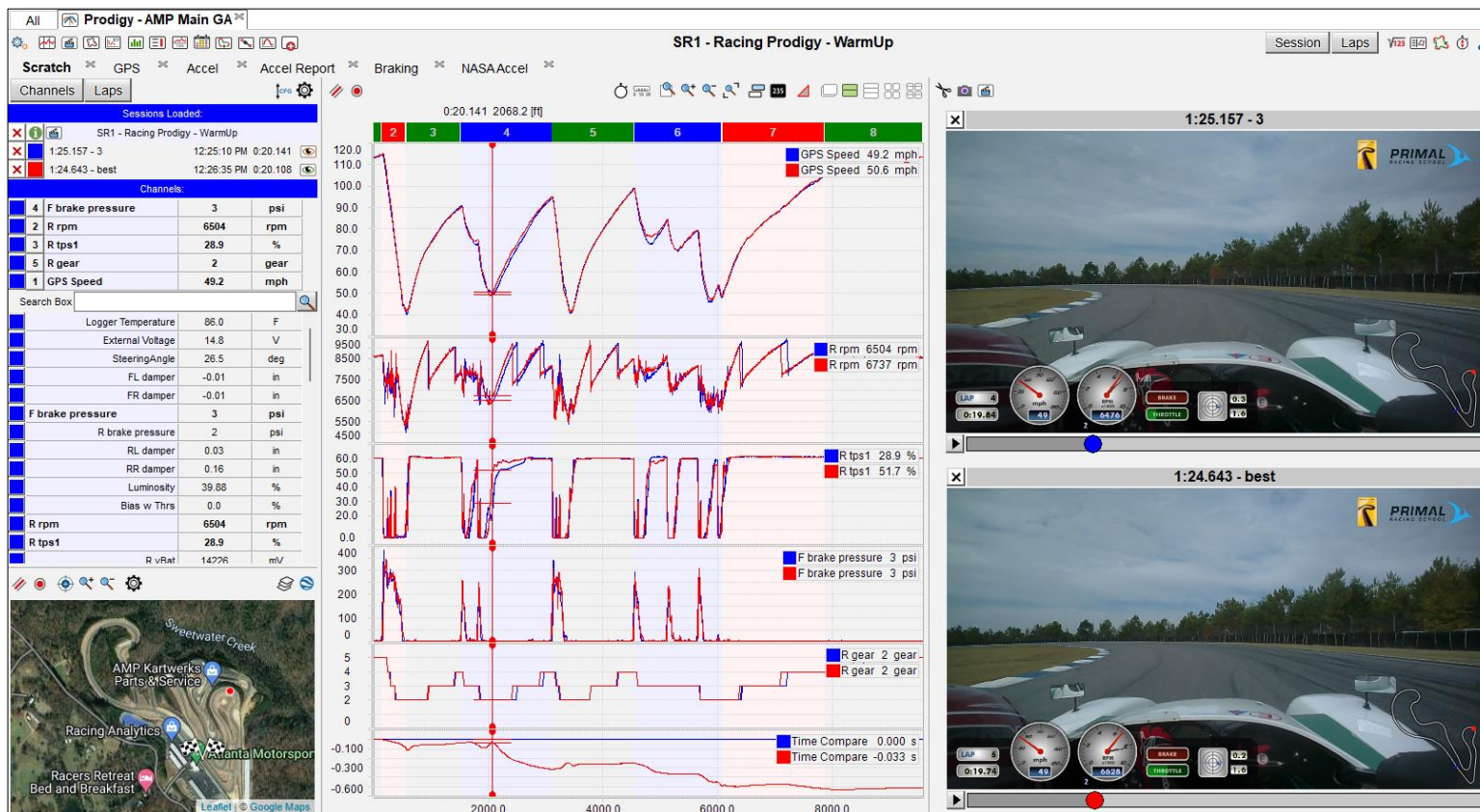


Racing Prodigy – Data Acquisition



Host:
Roger Caddell

AiM Sports - National Training Manager



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Sunday May 5th, 2024

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Today's Agenda

- What is Data Acquisition
- Why Use Data Acquisition
- How to Use Data Acquisition
- Data Concepts
 - What Happened
 - Where Did It Happen
 - Why Did It Happen
- Data Analysis - Data Triangle
 - Driver Performance
 - Vehicle Performance
 - Vehicle Health
- Data Analysis Examples



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AiM Sports - National Training Manager
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AiM Sports National Training Manager

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What Is Data Acquisition

What is Data Acquisition

Different Methods



- Seat of the Pants
- Stopwatch
- Video, Especially 'Smart Video'
- Data Acquisition Systems
 - Hardware and Software



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What is Data Acquisition?

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What is Data Acquisition

Another Tool in the Toolbox



- Just like an Engine or Shock Dyno, Your Data System Measures and Records Performance
- Not just Vehicle Performance
- Not just Driver Performance
- But Overall Performance!
- Sensors Gather Values and the Hardware Stores the Data of the Dynamics of what the Vehicle is Doing
- Software Makes the Detailed Data Analysis Possible



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Another Tool in the Toolbox

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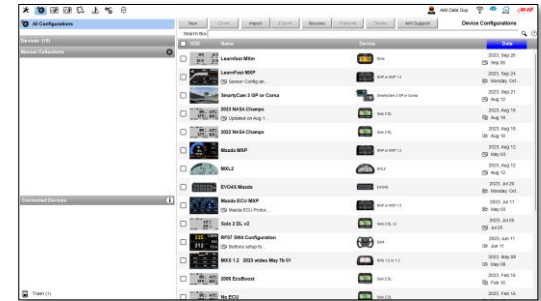
What is Data Acquisition

Race Studio 3 - Software Concepts



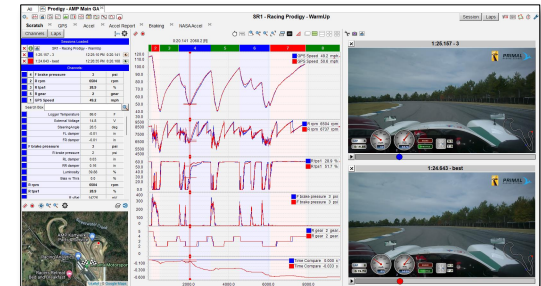
Configuration (Pre Session)

- Race Studio 3 has Powerful Functions for Configuring Your AiM Sports Data System
 - ECU Protocols
 - Sensors
 - Expansion Modules
 - Sampling Rates
 - Alarms
 - Shift Lights



Data Analysis (Post Session)

- Race Studio 3 has Powerful Functions for Viewing, Analyzing, and Understanding Your Valuable Data
 - Measure Plots
 - X/Y Plots
 - Channel Reports
 - Suspension Analysis
 - SmartyCam Video
 - And Much More!



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Race Studio 3 - Software Concepts



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What is Data Acquisition

Data = Knowledge



Knowledge = *Speed* ... How **Fast** Do You Want to Go?

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Data = Knowledge

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Why Use Data Acquisition

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Why use Data Acquisition

To Constantly Improve



To Constantly Improve:

- Driver Performance
- Vehicle Performance
- Vehicle Health
- **Results!**



With the Proper and Consistent Use of Data, Your Race Program Will Improve

Remember, it is just as important to understand what went 'right' as well as what went 'wrong'

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To Constantly Improve

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How to Use Data Acquisition

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How to Use Data Acquisition?

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How to Use Data Acquisition

Basic Steps



- **Hardware**

- Design
- Install
- Configure
- Calibrate
- Use
- Download



- **Software**

- Analyze
 1. What Happened?
 2. Where Did it Happen?
 3. Why Did it Happen?

← Repeat

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Basic Steps

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How to Use Data Acquisition

Data Analysis Concepts



Basic Data Analysis Steps

- What Happened? (many stop here!)
- Where did it Happen?
- Why did it Happen?
 - Probable Additional Question...
Vehicle or Driver?
 - Is the Driver Reacting to the Vehicles Movement? or
 - Is the Driver Creating the Vehicles Movement
 - This can be a Critical Component of 'Why'



Money Channels

- Lap Times and Speed
- All Other Channels Strongly Support the Money Channels

Data Analysis Triangle

- Driver Performance
- Vehicle Performance
- Vehicle Health



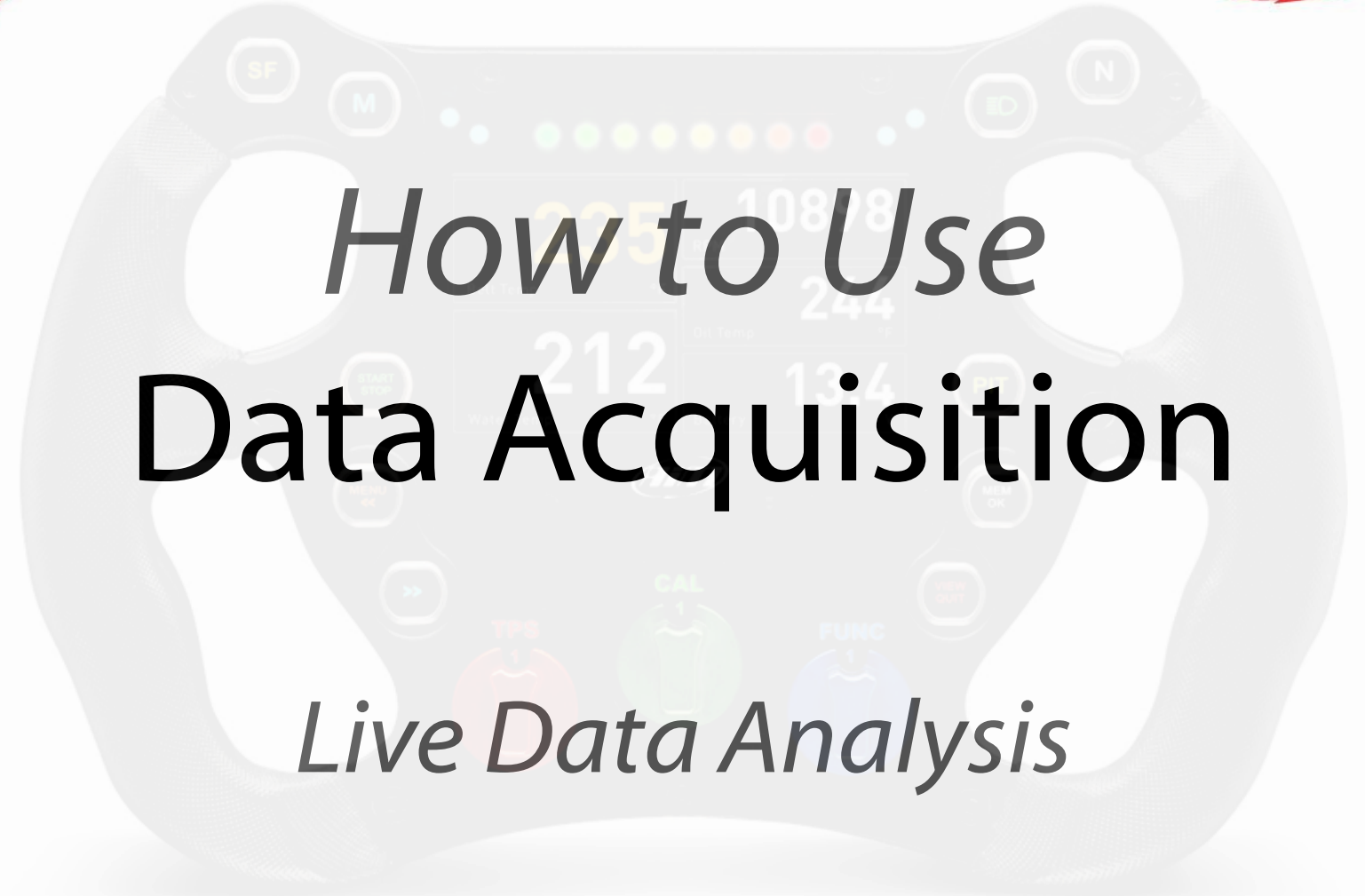
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Data Analysis Concepts

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How to Use Data Acquisition

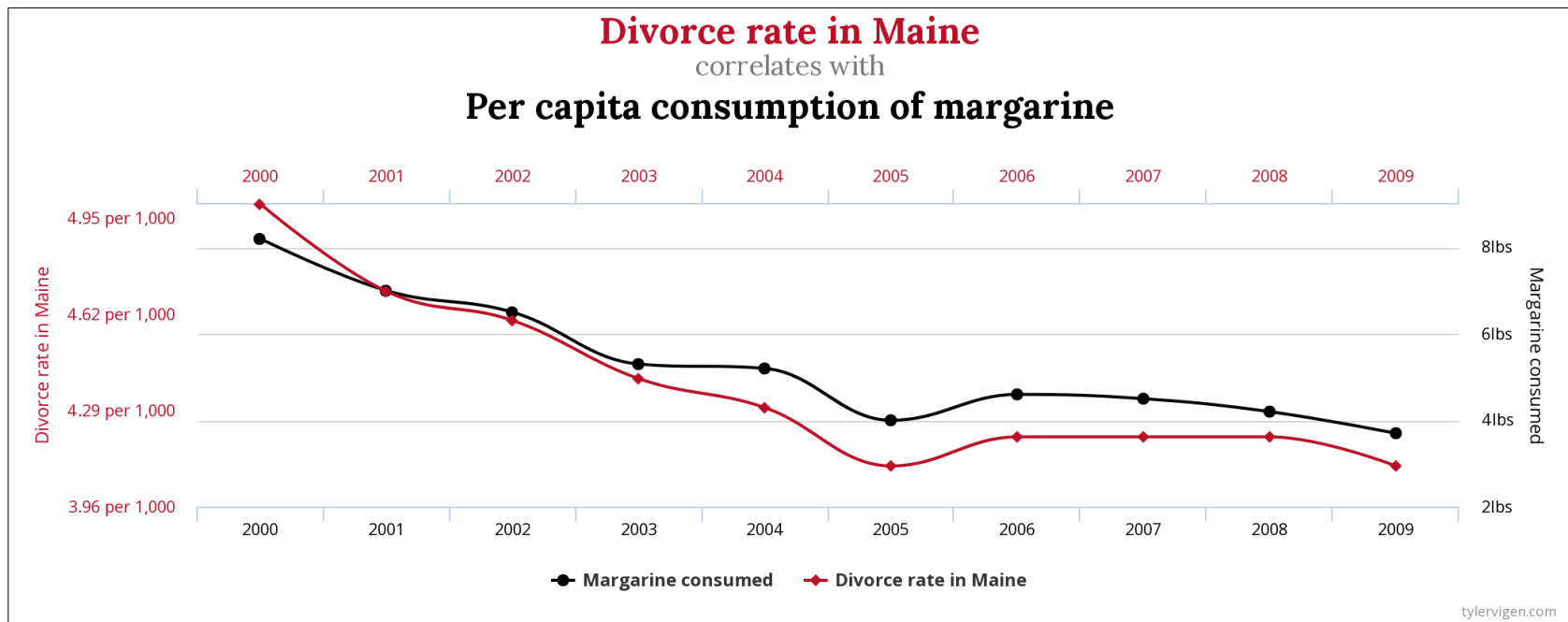
Live Data Analysis



Data Correlation

Be Careful - Data Can Lie!

In closing, here are some fun 'spurious' data correlations. These prove that while data does not lie, you still need 'Rational Thinking' to establish if there is an actual data correlation in the data.



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Be Careful - Data Can Lie!

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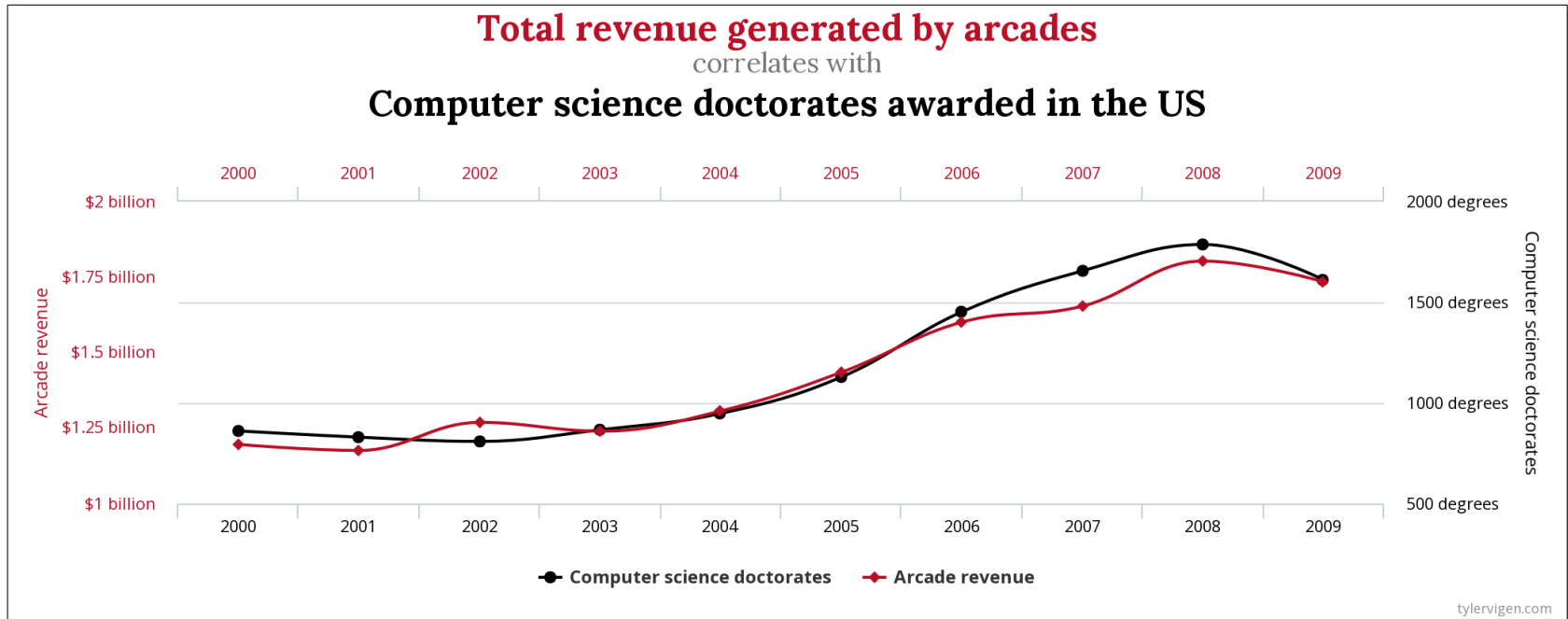


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Data Correlation

Be Careful - Data Can Lie!



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Be Careful - Data Can Lie!

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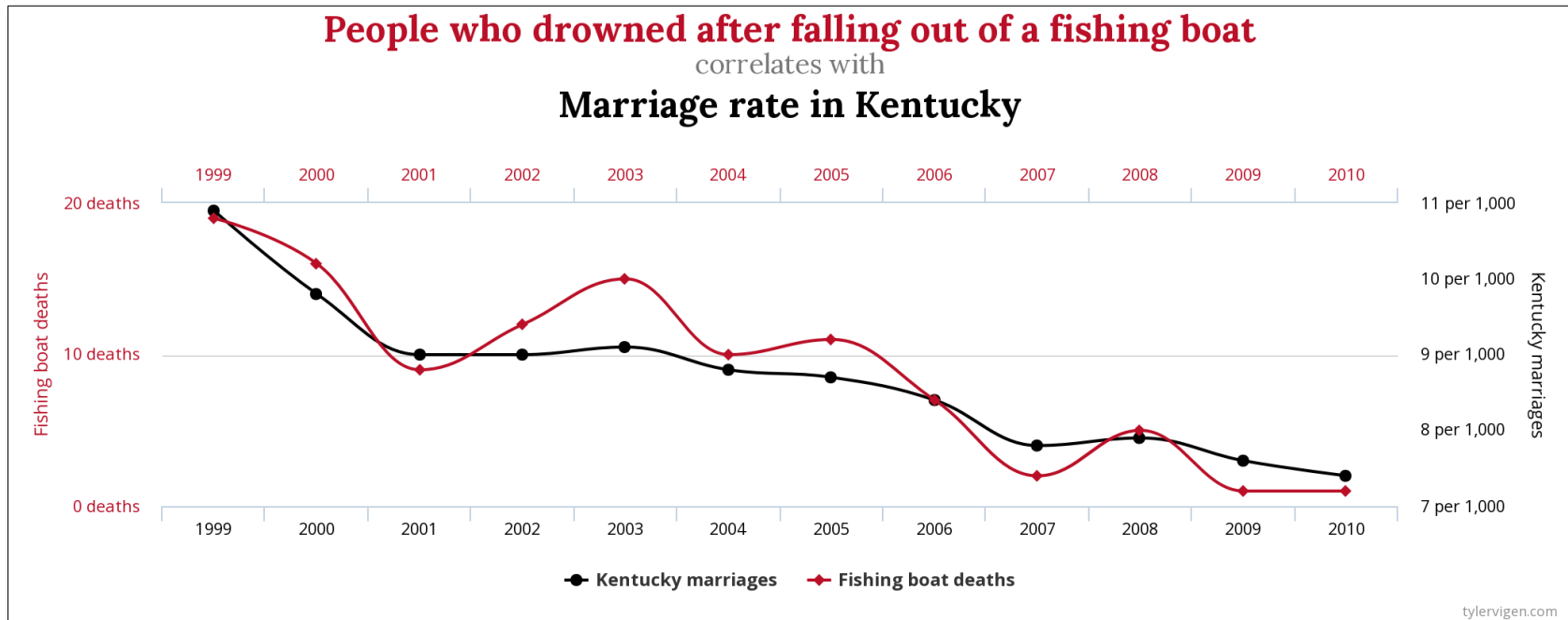


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Data Correlation

Be Careful - Data Can Lie!



Even silly data can correlate but it is your racing judgment and common sense that allows data to be used correctly.

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Be Careful - Data Can Lie!

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We Have Answers!
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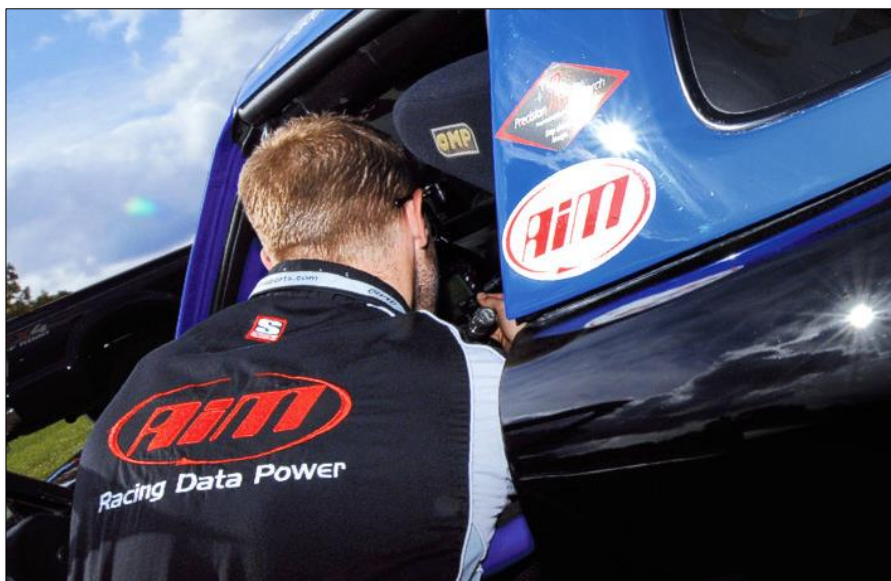
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If You Have Questions

Customer Support



AiM Sports Technical Support Staff Regularly
Attend Races and Other Events

Look For Us At An Event Near You
Or Call Us At **800.718.9090**



Customer Support

At An Event Near You!

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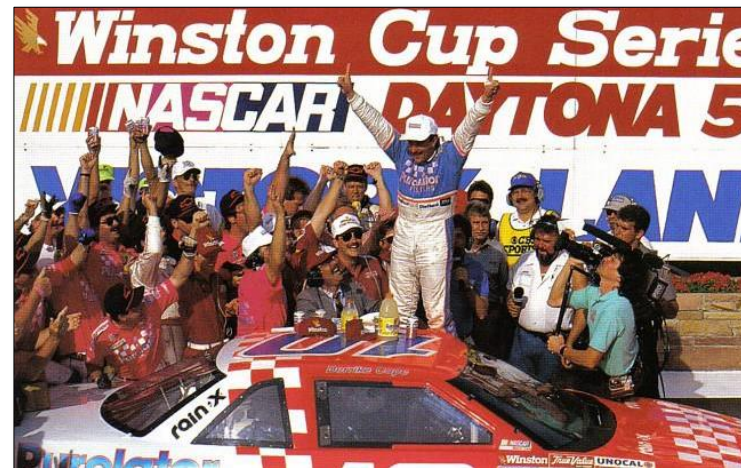
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Next AiM Sports Webinar

Tuesday, May 14th, 2024 – 6pm Pac / 9pm East



1990 Daytona 500 Winner Derrike Cope



Host:

Roger Caddell

AiM Sports - National Training Manager

Guest Derrike Cope: Talking about Racing Professionally, the Early Days of Data, Winning the Daytona 500, and How He is Now Using Data to Help the Next Generation of Racers

Next Webinar

2nd & Last Tuesday of Each Month

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LearnFast™ E-Training Videos



Currently **238** Videos and Growing

YouTube www.youtube.com/aimdata

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If You Have Questions

SW4 Steering Wheel

The Power of an AiM Dash at Your Fingertips



Host:
Roger Caddell
AIM Sports - National Training Manager

Co-Host:
James Colborn
JamesColborn.com

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Tuesday April 30th, 2024

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#173

- All New 2020 - 24 Live Webinar Videos
 - Software Updates with Race Studio 3
 - Pre-Calculated Gear Position Function
 - Configuring WiFi Communication
 - Customizing AiM Device Logos
 - Race Studio 3 Basic Configuration - Part 1
 - Race Studio 3 Basic Configuration - Part 2
 - **I Have Downloaded my Data, Now What - Part 1*
 - **I Have Downloaded my Data, Now What - Part 2*
 - GPS Lap Insert
 - Selection Criteria
 - Data Views
 - Sensor Calibration
 - Measure Units
 - Conditional Alarms
 - Sort Channels
 - Gear Position
 - Test Properties
 - Firmware Update
 - Per Lap Color
 - Solo Configuration
 - Export Tests
 - Transmit Tracks
 - Channel Reports
 - Gps Manager Overview
 - Setting Time
 - New GPS Track
 - Track Mapping
 - Webinars
- * *Most Popular and Recommended*

Finding Speed with Data
The Universal Goal for All Racers



Host:
Roger Caddell
AIM Sports - National Training Manager

Co-Host:
David Smith
KarltonSmith.com

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Tuesday April 9th, 2024

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Webinar Series
Bringing Data Support and Training to You

Data Download Options
In Race Studio 3

March 31st, 2020

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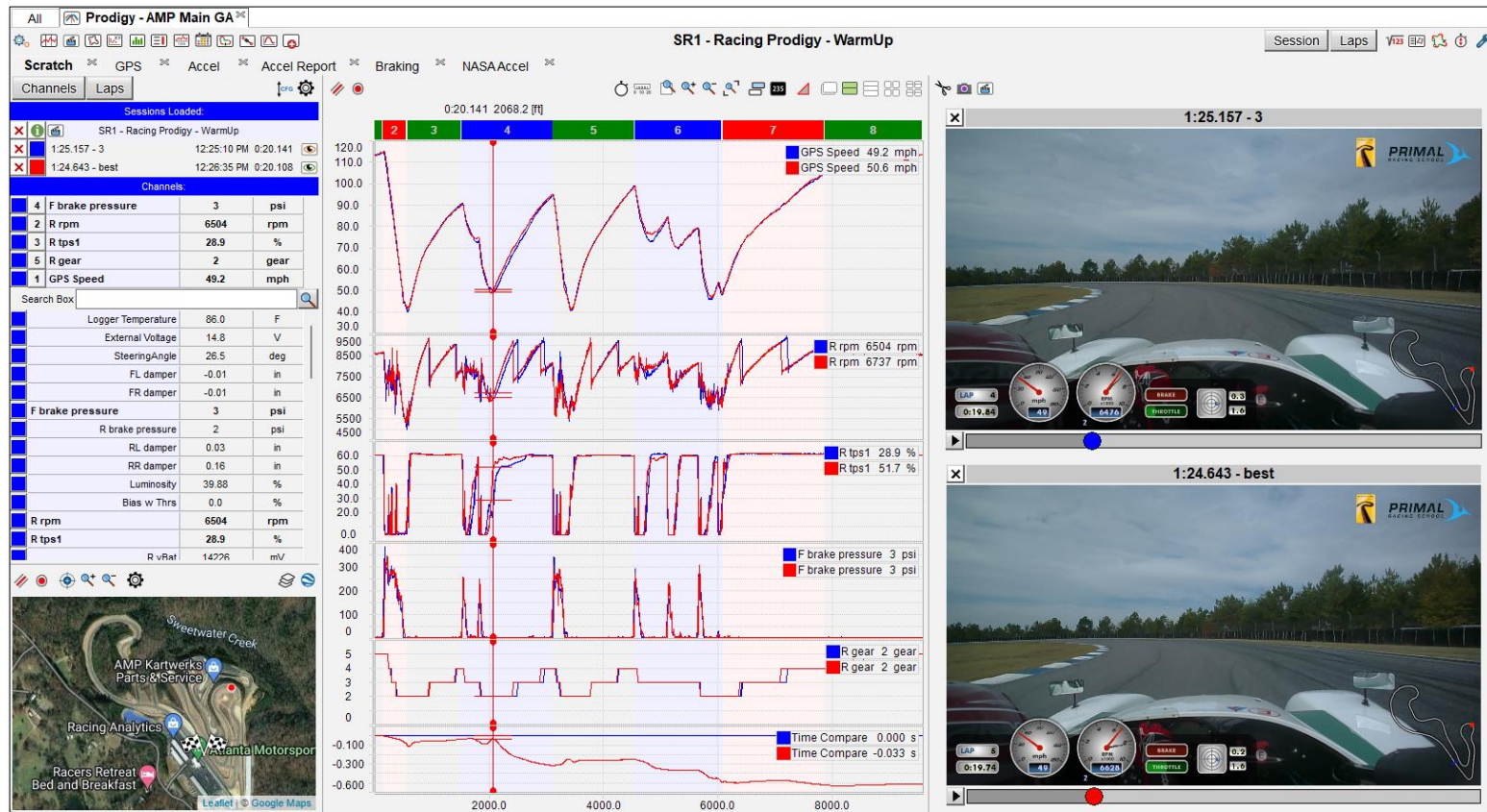
Additional Materials

LearnFast™ E-Training Videos

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Host:

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Sunday May 5th, 2024

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