

The background of the slide is a photograph of several rowers in a regatta on a body of water. The rowers are wearing various colored uniforms, including blue, white, and red. In the upper center, the Olympic rings logo is visible. On the right side, there are decorative circular graphics, including a large semi-transparent circle and several smaller ones. The title text is centered over the image.

Positioning strategy in Olympic rowing

By Shayna Martin, Ethan Machen,
Alex Goldberg, and Maya Balan

A background image showing a rowing team of six men in a boat on a river. A bridge is visible in the background. The image is overlaid with a semi-transparent teal filter.

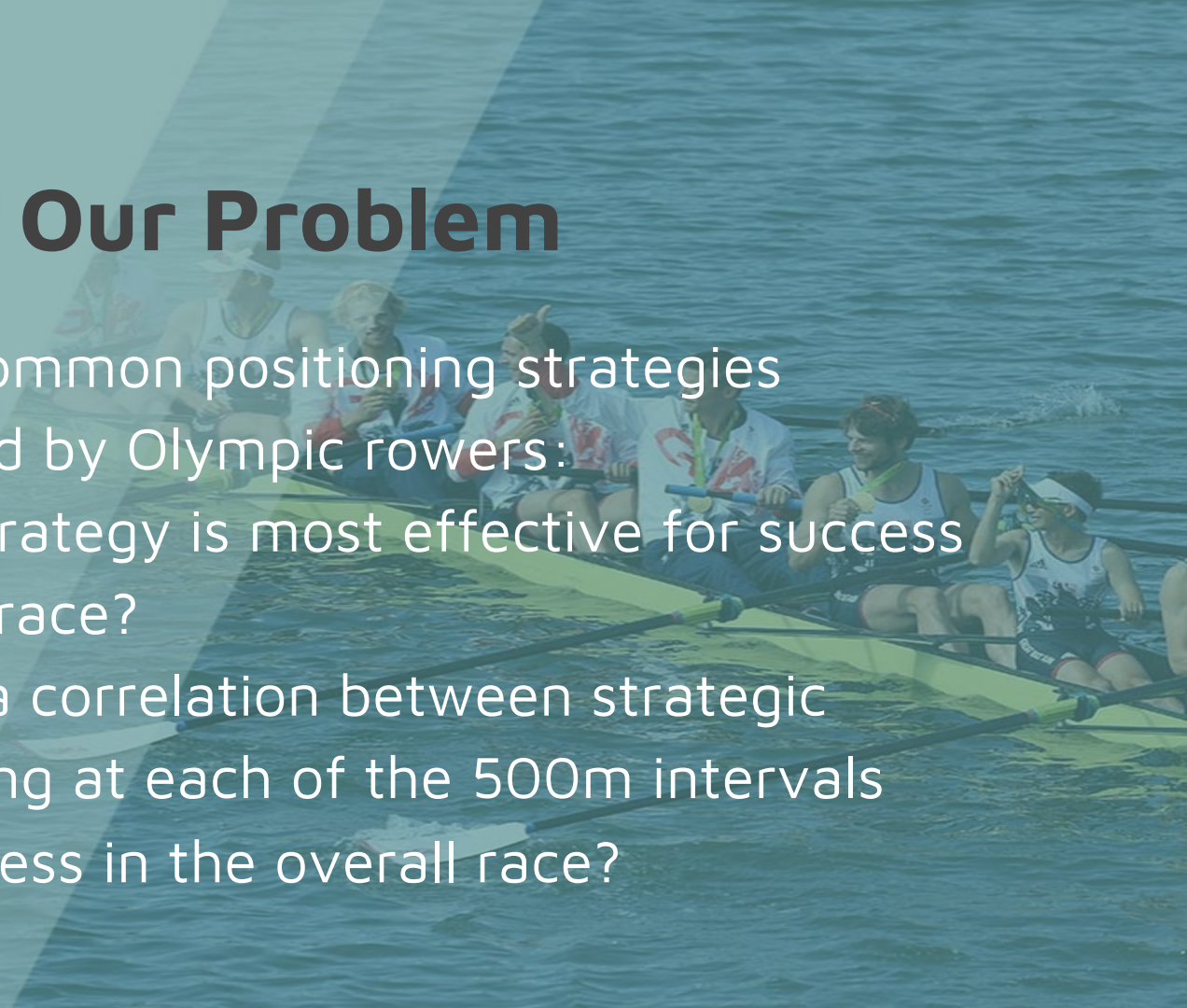
Background

- Rowing has been a prominent sport throughout the history of the Olympics since 1900.
- **Proper strategy is one of the most critical elements in the sport, overall.**
 - Most teams enter a race with a pre designed plan in how to approach the 2,000 meters ahead of them.



Our Problem

- Given the common positioning strategies implemented by Olympic rowers:
 - Which strategy is most effective for success within a race?
 - Is there a correlation between strategic positioning at each of the 500m intervals and success in the overall race?



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Research and Data Collection

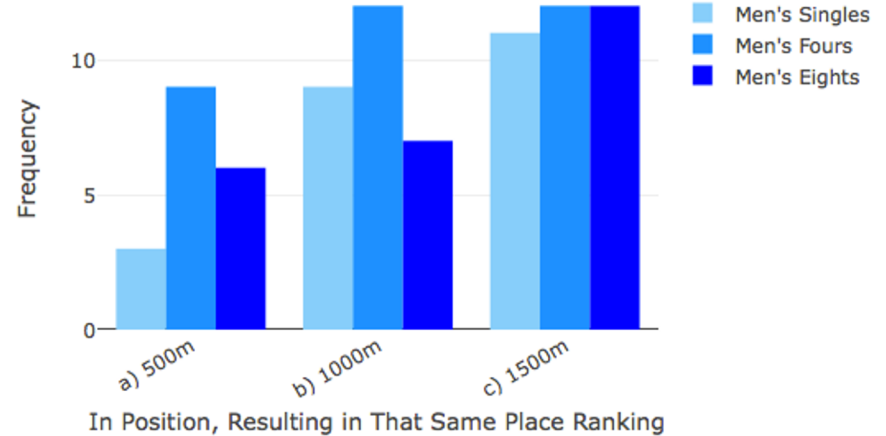
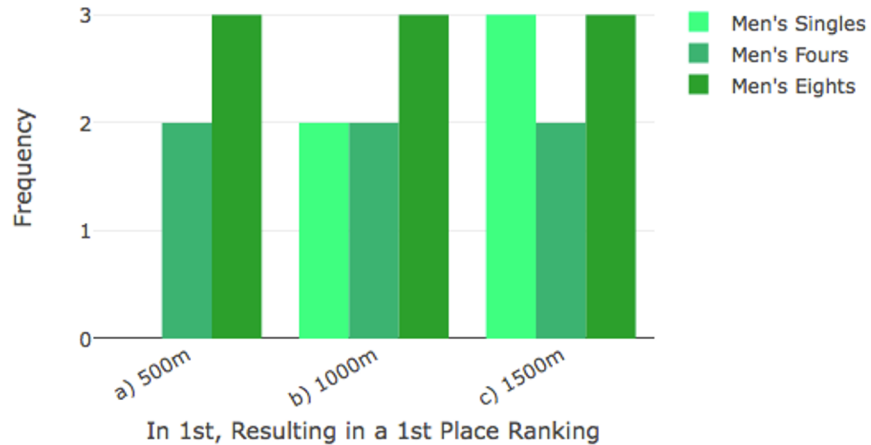
- Rowing results from the Singles, Fours, and Eights Finals were taken from the 2008, 2012, and 2016 Olympics
 - Including:
 - Time relative to meters rowed
 - 500m, 1000m, & 1500m marks.
 - Positions at given points of the race.
- **Goal: Determine most effective strategy in positioning that leads to success.**

Methodology

- Three years of olympic used to limit confounding factors.
 - E.g: weather, course difference, “home course advantage”, etc.

Rio 2016

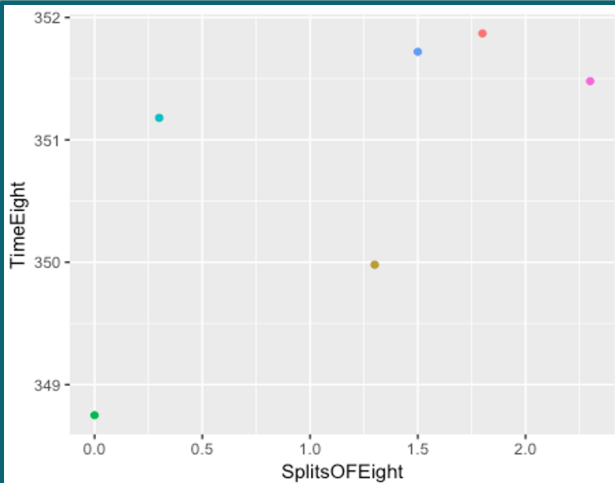
Olympic Data Graphs



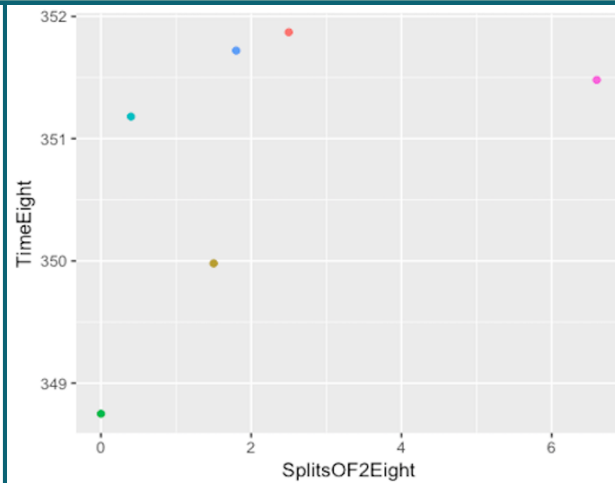
Olympic Data Graphs

CountryEight

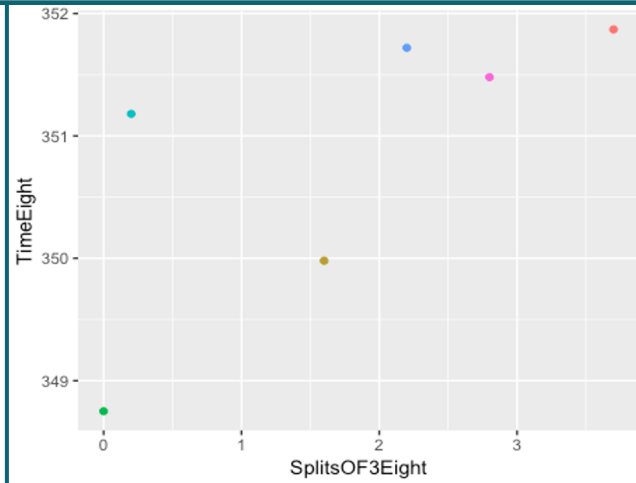
- Australia
- Canada
- Germany
- Great Britain
- Netherlands
- United States



$R=0.6842$



$R=0.5074$



$R=0.7123$

A background image showing four rowers in a boat, wearing blue and yellow uniforms, with their oars visible. The image is semi-transparent and serves as a backdrop for the text.

Results and Analysis

- Smaller boat's final ranking is less determined by positioning at the beginning of the race
 - Final position is apparent the longer the race goes on
- Large boat's final ranking is more determined by early boat positioning.

Confounding Factors

- Some Confounding Factors *not* controlled for include:
 - Fitness of the olympians
 - Strength of the Stroke (Watt) VS Number of Strokes (Rate)
 - Age of the olympians.
 - Experience
 - Mental strength of olympians.

A photograph of two rowers on a body of water, likely a lake or river. The rowers are in their respective boats, with oars visible in the water. The water is a deep blue-green color. A red buoy is visible in the background. The word "Questions?" is overlaid in a large, bold, dark font in the center of the image.

Questions?