An analytical report to improve Assetto Corsa game player performance.

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Introduction

1. No game was won when Assetto Corsa was played many times.
2. An idea was thought to improve game player performance by analysis.
3. Figure 1 shows 8 variables that can get switched on.
4. These variables were tested to look at how they can improve performance.

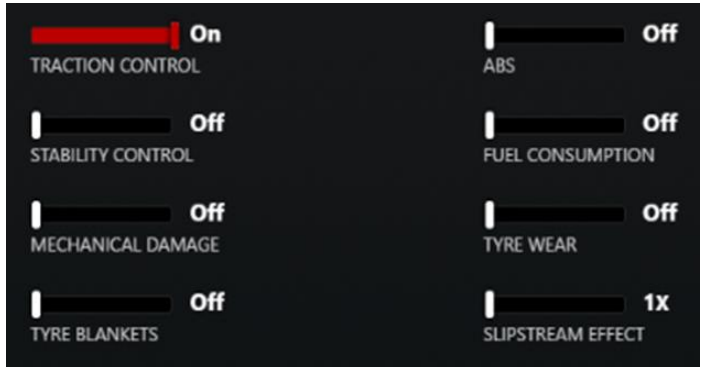

Figure 1

Aim

1. To improve Assetto Corsa game player performance.

Objectives

1. To produce a hypothesis test.
2. To ask relevant questions that can provide solutions.
3. To collect numerical data from game races.
4. To clean collected data.
5. To make tables from collected data.
6. To plot graphs.
7. To analyze data.
8. To get to improve game player performance.

Research question

A game player can't win a driver racing game. This game player decide to improve his game by a statistical analysis. There are 8 variables that can get switched on that can affect driving a car. Each variable has a 50% chance of affecting game player performance. Lots of confidence exist that at least one variable can improve game player performance

1. Can at least one variable improve game player performance to help this game player win races?
2. How does each variable affect game play?

Method

1. Each variable was switched on while other variables were switched off.
2. Races were completed driving an Abarth 500 SS.
3. Race time was recorded at the end of each race.
4. A hypothesis test was done at the beginning to confirm that each variable can affect game player performance.

Results

Hypothesis test

H_0: p = 0.5, No variable can improve game player performance.
H_1: p > 0.5, At least one variable can improve game player performance.

Results

1. Each race number had 2 laps. Third bar was for race time.
2. First lap was slow compared to lap 2 for each race, with each variable.

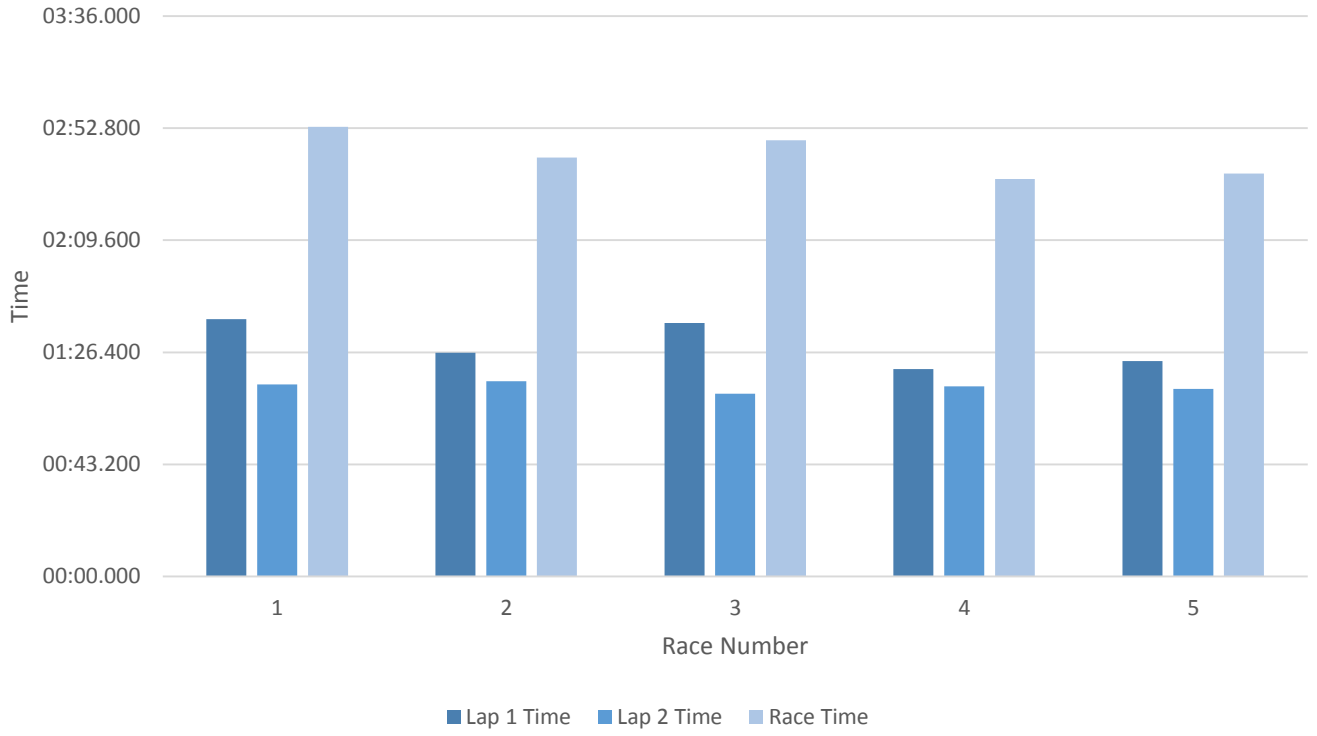

Figure 2

Results

Race time percentage was recorded. Figure 3 at the bottom visualize these results. Traction control made this car slow while fuel consumption had good results.

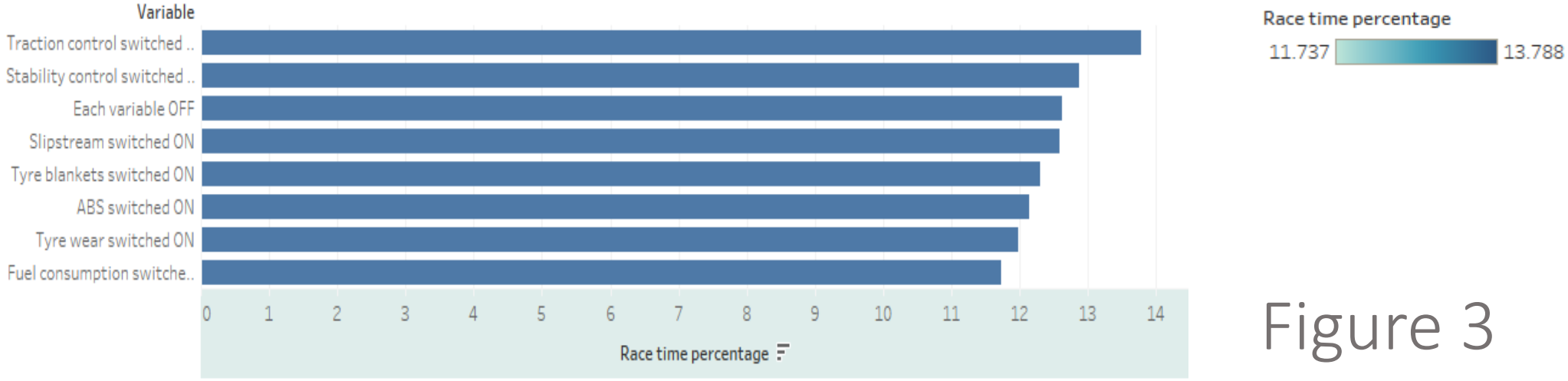

Figure 3

Analysis

$P(X \geq 1)$ was 99.6% this means $P(X \geq 1) > 95\%$, test value x = 8 can be in critical region. This was enough evidence to reject H_0.

Analysis of experiments showed that traction control was a cause of slow races. Stability control did not help a lot. Mechanical damage caused a disaster. Other variables improved game play.

Conclusion

Assetto Corsa was proved to be a true racing simulator. Car drives similar to a real life car.

Traction control, mechanical damage, stability control were switched off to switch on 5 remaining variables that improved game player performance.

This analysis improved game player performance.

Recommendations

1. Switch off traction control, stability control, mechanical damage.
2. Switch on other 5 variables.
3. Turn sharp corners with gear number 2.
4. Avoid crashing.
5. Practice driving.

Thank you.