**INTRODUCTION**

The Electric Go Kart is a system design to create a small scale unit of transportation without an internal combustion engine. This system is intended to create an efficient and fun experience for those who use this product.

The go kart is designed using two DC-Brushless motors that use a 60V battery. Each motor moves its own drive socket to provide faster acceleration. Each motor's torque is monitored and constantly adjusted by a controller and an acceleration pedal.

The Electric Go Kart is designed to be a fun, inexpensive mode of transportation.

**ARDUINO GAUGES**

The Electric Go Kart uses an Arduino to monitor the system. The Arduino calculates the state of charge (SOC) of the battery by comparing the battery voltage to the battery's rated voltage. The speed of the go kart is measured using a hall sensor and a magnet attached to the rear axle. Each time the axle makes a full rotation the hall sensor is activated. Taking the time between hall sensor triggers and the radius of the rear wheels the speed of the go kart is calculated. The go kart speed and battery SOC are displayed on an LCD screen connected to the Arduino.

**CONTROLLER**

**ARDUINO SETUP**

**GO KART ACCELERATION**

**SPECIAL THANKS TO:**

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[Image of Electric Go Kart and Arduino setup diagrams]