

Group Project: Planning Phase

CSE 499

Members: Andrew Woska, Daniel Maas, Imani Muhammad-Graham

GitHub: <https://github.com/agwoska/cse499-portfolio>

What are we building?

Self Balancing Robot (<https://youtu.be/5jxOpqJ2k3U>)

What are we going to control?

Balance and/or movement of the robot

What are the sensors?

Tilt Sensors

Gyroscope

Ultrasonic Sensor

What is the actuator?

DC motor

What is the feedback?

Tilt Angle

What part is hard-real time?

Angle correction

What part is soft-real time?

Sampling sensors

BOM:

- MEMS Gyroscope
- Tilt Sensor
- Ultrasonic Sensor
- L4R5ZI
- 2 DC motors
- 2 Wheels
- Chassis
- Screws, spacers, and nuts