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COGS 189 Project Proposal

We want to design a setup that allows one to control the movement of a 4-wheel Arduino based robotic car using a Neurosky headset. At a basic level, we want to use the attention measure to accelerate the car (the higher the attention, the greater the acceleration).

The first stretch goal would include creating 2 cars and having 2 people race on fixed straight path wherein whoever can pay the most attention or focus on a single thought for the longest time wins. The other stretch goal would be changing the direction of motion using some other measure (such as the alpha waves from the meditation measure)[1].

Alternatively, we may create a hybrid setup wherein we will use the brain data from the Neurosky as a method of acceleration and a game controller or arrow keys as a method of changing direction.

The Arduino based car and the headset would both interface with a computer (using Bluetooth) which will serve as a link between them.

[1] We found a video that demonstrates this

<https://www.youtube.com/watch?v=zlUZ6bhUcBk>

The code is opensource on github.