Hi everyone. Today I want to show you one of my Arduino projects. İn this Project i control motor speed using Matlab GUI. İ ve used a dc motor and pulse counter to control motor speed for his project.

Before achieving this Project i make a literatüre rewiev and found out that there is not lots of source on the internet. So i decided to make this video.

First of all, probably this is not the best way to control motor speed. Because arduino and matlab comminication isnt fast enaught and matlab gui isnt a right tool for doing that.Therefore if u have any recomendation please tell me in the comment section.

İn the right you can see matlab gui window, and on the left my dc motor. You can see the pin voltage at the left bottom in the command window. When clicking the drive motor button matlab sends the signal to arduino and it starts working. Then my encoder measures the speed of my motor and sends the results back to the matlab. Then matlab make a decision speed up the motor or slow down depending on the results. You can see the results with the blue line and referance rpm with the dashed red line.

Let's try it now. İ set seventy for referance rpm. Motor stat to run and mesures it a first forty seven and then ninty. A little higher than referance so matlab reduces the pwm voltage. Try to make it stable

Now it is stable..

Let's try another example. Now i set fifty for referance rpm

And stable around fifty

Tahnks for watching.