

TEAM FOOTBRAWLERS

FRESHERS TASK

WHAT TO DO?

- ▶ Design a BOT that will get an instruction from a laptop with a colour name as a string.
ex: "red","green","blue".
- ▶ Assuming there are THREE RGB lines in front of the bot, based on the instruction recieved the bot should take that path till the line ends.
- ▶ Go really creative with the design, the approach and movement.



WORK DISTRIBUTION – CSE

- ▶ A program needs to be written to receive the colour from another laptop using , "WEB SOCKETS".
- ▶ once the colour is received, the second program should be able to identify which line is what colour using "COMPUTER VISION" an image processing library.
- ▶ The end result of your program will be to return the Image after highlighting only that colour component on screen.

WORK DISTRIBUTION – ELECTRICAL

- ▶ Your task is to write an arduino program that is capable of running 4 motors in ALL WHEEL DRIVE mode using motor drivers.
- ▶ The code should take serial input from the user , upon receiving "y" it should start moving and once it receives "n" it should stop moving.
- ▶ You also need to design the circuit and show the circuit diagram since there is no actual hardware.

WORK DISTRIBUTION – MECHANICAL

- ▶ Get really creative with your bot design.
- ▶ your design needs to accomadate an arduino, a camera in the front, needs to have space for motors and motor drivers and also a space for a raspberry Pi micro controller which will run the image processing codes.
- ▶ The Bot can't be too big due to material costs, you can also choose which material to use to build the bot and which would be most effecient.

ADDITIONAL TIPS

- ▶ Consider how to power the bot and the entire system to atleast stay on for 5 mins.
- ▶ take into account a rough weight estimate and what kind of motors you'd require to push that kinda weight.
- ▶ Talk within yourselves, communicate with each other and understand each others roles.
- ▶ Come up with the best project :)