

# ENGR 3421: ROBOTICS I

## Into the Autonomous Ground Vehicle

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## Safe First!

Don't forget eyes and hands protection!

Go over the [syllabus](#) for policies and contents.



# Outline

What is a Robot

Our Robot

Github Classroom



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What is a Robot

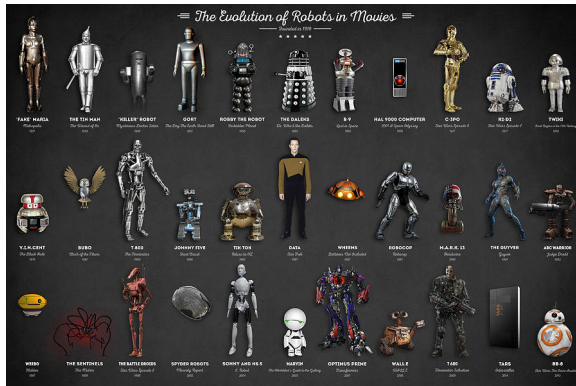
Our Robot

Github Classroom



# In Popular Culture

A robot is a machine resembling a human being and able to replicate certain human movements and functions automatically.



# In Real World

Robots may be constructed to evoke human form, but most robots are task-performing machines, designed with an emphasis on stark functionality, rather than expressive aesthetics.

Car factory robots

Vaccum clean robots

Warehouse robots

Agricultural robots and DJI solutions

Lightshow drones

Toys



# In Scientific/Engineering Research

A robot is a machine—especially one programmable by a computer—capable of carrying out a complex series of actions automatically.

Humanoid

Quadrupedal robot

Spherical robot

Flapping robot

QuadrotorDrone

Underwater robot

Soft robot

Extra-terrestrial rover

You name it...



## Autonomous Ground Vehicle (AGV)

A.k.a. automated guided vehicle, mobile robot, unmanned ground vehicle (UGV).

## Self-driving cars

## Delivery robots

## Warehouse robots





Build it, Break it, Fix it



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# Our Robot

- Chassis
- Motor Brackets
- Motors
- Wheels



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# Github

**Git**Hub is a website and cloud-based service that helps developers store and manage their code, as well as track and control changes to their code.



# Github Classroom

- **GitHub Classroom** automates repository creation and access control, making it easy to distribute starter code and collect assignments on GitHub.
- This is the place you'll complete most (if not all) of your assignments.

## Note

Access Github Classroom using address:

<https://classroom.github.com>

