

ETLS 681  
AI, Robotics and  
Autonomous Systems

# Content

- Environment setup (for PC)
- Turtlebot-3 distribution for each team

# Schedule

1	9/12	In person + Video	Introduction & Turtlebot3 e-manual video
2	9/19	Video	Introduction to Robotics and Turtlebot3
3	9/26	Video	Sensors for navigation and object recognition
4	10/3	Video	Introduction to ROS
5	10/10	In person	Intro to visual info understanding+ Team present
6	10/17	Video	Computer Vision 1 (image processing)
7	10/24	Video	Computer Vision 2 (OpenCV)
8	10/31	Video	Deep Learning and Gesture Recognition
9	11/7	In person	Gesture Recognition implementation and present
10	11/14	Video	NN and CNN
11	11/21	Video	Object Recognition, tracking and segmentation
12	11/28	Video	Kinematics and Manipulation
13	12/5	In person	ROS for navigation and sensing
14	12/12	Video	Collaborative Robots + Continue Group Project
15	12/19	In person	Final Presentation (Team Live)
16	12/20		Individual Final Report Due

# Collaboration Team

1	David	Jacob	Moyata			
2	Alex	Colin	Mitch			
3	Rithya	Meng	Mohamm ad			
4						

# Environment setup

- PC setup
  - Ubuntu → download the .iso file
  - Virtual machine → download and install VMware (must create an account)

<https://releases.ubuntu.com/focal/>  
Ubuntu 22.04

ubuntu<sup>®</sup> releases

Ubuntu 22.04.5 LTS (Jammy Jellyfish)

## Select an image

Ubuntu is distributed on three types of images described below.

### Desktop image

The desktop image allows you to try Ubuntu without changing your computer at all, and at your option to install it permanently later. This type of image is what most people will want to use. You will need at least 1024MiB of RAM to install from this image.

#### 64-bit PC (AMD64) desktop image

Choose this if you have a computer based on the AMD64 or EM64T architecture (e.g., Athlon64, Opteron, EM64T Xeon, Core 2). Choose this if you are at all unsure.



ubuntu-22.04.5-desktop-amd64.iso

2024-09-11 14:38

4.4G

<https://support.broadcom.com/group/ecx/productdownloads?subfamily=VMware%20Workstation%20Pro&freeDownloads=true>



**BROADCOM** Products Solutions Support and Services Company How To Buy

## ← VMware Workstation Pro

### Products

VMware Workstation Pro 17.0 for Windows