DASL 107 Introduciton to ROS
Class #1

Agenda

- Install Ubuntu

- Why Learn ROS?

- What is ROS?

- Install ROS

Install Ubuntu

- Plug in the USB while computer is off

- Turn on and go into boot mode (Usually f12 but could be different)

- Install Ubuntu

- Make sure not to connect to wifi during installation
  - The school wifi has added security that makes it harder to connect to

Why Learn ROS?

- It's used in robots across different industries
  - Military (ROS-M)
  - Manufacturing (ROS-I)
  - Academia (ROS 1/2)

- Modular design
  - Easy to reuse code in various projects
  - Easy to add/change functionality (Rapid Prototying)

- Distributed Computation
  - Can run across multiple computers and robots

What is ROS?

- Robot Operating System (ROS)
  - Communication Middleware Layer
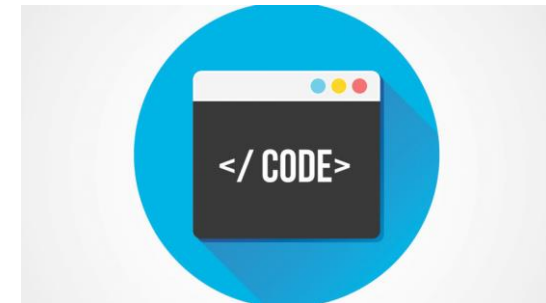
What is ROS?

- 2007 Stanford Artificial Intelligence Lab
  - Switchyard
  - STAIR robot
- 2008 Willow Garage
- 2013 Open Source Robotics Foundation (OSRF)

Install ROS

- For every version of Ubuntu there is a version of ROS made specifically for it.
  - For Ubuntu 16.04 use ROS Kinetic
  - For Ubuntu 18.04 use ROS Melodic

Install ROS

- Go to the corresponding instructions and follow them carefully
  - Kinetic (http://wiki.ros.org/kinetic/Installation/Ubuntu)
  - Melodic (http://wiki.ros.org/melodic/Installation/Ubuntu)