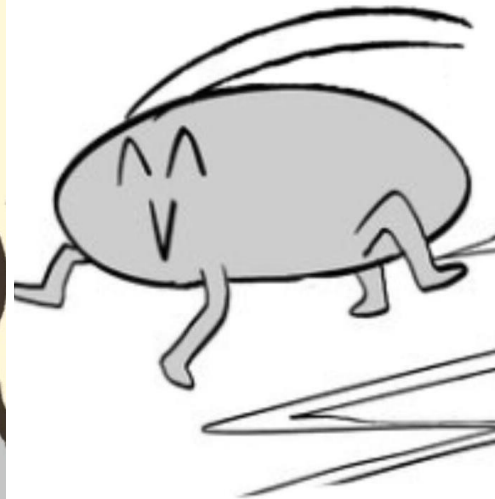


Team 2 – [NeuralBots]

NeuralBots is all you need!

Team Members

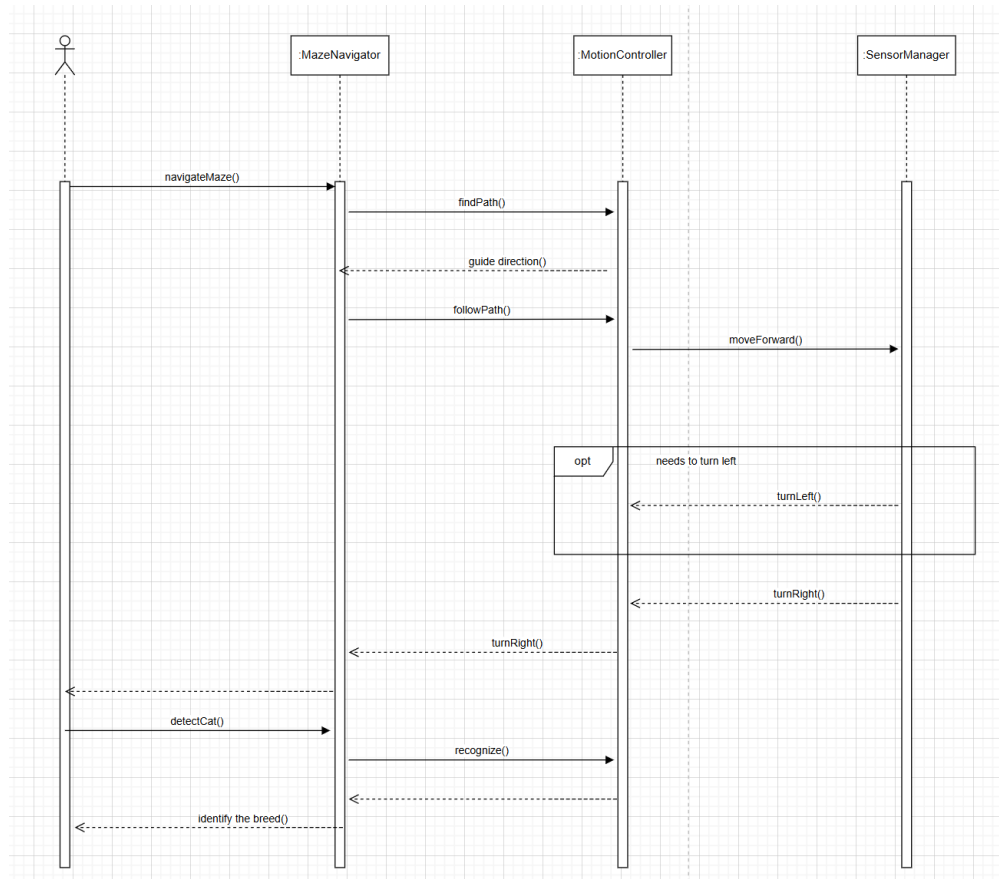


Our Aims

- Learn machine control, visual recognition.
- Do something interesting (see later on:).
- Turn our ideas into reality.

Baseline Model Specification

- Given the actual platform + hardware, use UML Deployment Diagram to describe your understanding



Our COOL Idea - Overview

- Overview:
 - In this advanced model, we create a pet community where each pet has unique requirements for receiving deliveries. Our robot car is designed to automatically fetch parcels by recognizing different pet images and corresponding pickup codes. This guides the robot to the specified location. Additionally, the system can be enhanced with various bonus features such as personalized product recommendations for each pet based on their preferences and obstacle detection for improved safety and reliability of the robot's navigation.

Our COOL Idea - Key Components

- **Key Components:**
 - **Pet Identification:**
 - Use image recognition to identify different pets.
 - Each pet has a unique pickup code associated with their delivery.
 - **Automated Delivery Robot:**
 - Navigate to the specified location based on the pickup code.
 - Fetch the parcel and deliver it to the designated pet's area.
 - **Personalized Product Recommendations:**
 - Use regression analysis to recommend products based on each pet's preferences.
 - Push personalized products to the pets within the community.
 - **Obstacle Detection:**
 - Enhance the robot with sensors to detect and avoid obstacles.
 - Ensure the safety and reliability of the robot's navigation.

Key Problems

- Identify the key problems:

Deep Learning:

- Q: Objects the model recognize are not correctly classified into the categories we have set.
- S: Using a more complex neural network architecture

Robotics:

- Q: Keeps the car moving with smooth tracking.
- S: Overnight PID tuning.