Image Analysis

NJRB2 | MVS9 | FA296

# Problem Description

The drone needs to identify at least two elements in order to complete its objective – the **Roomba** and the **Pen**. The Parrot AR Drone 2 platform has two cameras – a 360p downward-facing camera, and a 720p front-facing camera. These cameras can be used to identify both of these elements. We will need to use some form of image analysis to recognise these elements.

Our supervisor recommended that we use a QR code on top of the Roomba as a unique and environmentally-distinct marker. He also recommended that we use a simple shape marked out by tape on the floor for the pen.

# Milestones

1. Get Roomba pattern recognised under any circumstances
2. Get Roomba pattern exclusively (not recognising similar patterns) recognised under any circumstances
3. Get Roomba pattern exclusively recognised at different sizes
4. Get Roomba pattern exclusively recognised from different angles
5. Get Roomba pattern exclusively recognised at different sizes and angles
6. Get Roomba pattern exclusively recognised at different sizes and angles in varying lighting conditions
7. Get pen recognition working (update after Maz talks to Dan 2018-10-04)

# Work Done

2018-10-02 – Milestone 1 complete using templating