**Problem :**

Help drones to clean the buildings autonomously with the help of computer vision techniques.

Adding a vision system to the drone.

**Current Scenario:**

A person is needed to take control of the drone and look for the stains/ dirt on the building through the camera/ at his disposal and clean the building.

**Proposed Solution :**

Using computer vision techniques like detecting dirt and stain in a video or in an image, make the drone to automatically dispense water/ cleansing liquid at those areas.

**Steps :**

1. Set the drone to travel within the boundaries of the building.
2. Obstacle detection through the video it’s capturing.
3. Detecting the edges/corners of the building using edge detection techniques like Hough Transform for the drone to change it’s direction / give more attention at edges, because that’s where significant portion of dirt resides.
4. Process the video/ images to detect the dirt and stains in the images/videos it’s capturing
5. Dispense the water / cleansing liquid after processing the step-4

**Challenge**s**:**

1. Processing the video in real time and giving instructions to the drone based on the real time results.
2. Traversing the building path effectively like Reaching out every edge / corner above the building, it becomes more complex with unstructured buildings.

**Company :**

1. I would like to work with the company [Lucid-NC](http://www.luciddronetech.com/).

Yes, I am open to revise or change my proposed solution or approach if the company needs so or to get in pace with others in the team.