# Grabbing Mechanism

**Continued from Object Detection
(Grabber is vertically above the Object)**

Main
Mechanism

Alternative
Mechanism

### Get Surface Area Normals and Average them.

### Compare the orientation of object in which it is lying with database.

### Find the centroid using pre-defined method for that particular shape

**Check the Orientation of Surface Area Normals w.r.t. Line of Gravity**

If Parallel

### The Centroid of object and Center of suction gets aligned.

### Lead screws gets fully extended to push fingers of grabber outside

### Once suction is in position, arm moves down towards the object

### Vacuum Pump is turned on and object is picked by arm.

If not
Parallel

### Centroid of object gets aligned with Centroid of grabber.

### Servo motors rotates fingers to an angle that ensures better gripping.

### Object is picked and rotated such that it will be dropped along surface with least area of cross-section

### Use pre-defined algorithm for picking that specific object in that particular orientation

It uses DNN's to use a
specific mechanism under
specific conditions

### Deploy Grabber or Suction cup accordingly

**Towards Drop Area**

**Towards Drop Area**