**Motor Characterization**

* Torque
* RPM
* Lift Force

Cantilever beam with motor attached. The beam is grounded on table. The beam if fitted with two strain gages. One on the top of the beam which will detect the lift force through changes in voltage. The second strain gage will be mounted on the side of the cantilever beam and will measure the torque. The motor could be mounted on the end of the beam using threaded screws. The primary issue with this testing method is the choice of material. We need a material that will be strained enough for the strain gages to detect. In order to detect the the rpm, we will use a tachometer only works during steady state.

The electronic speed transducer requires a logical input and will let a certain amout of voltage that will let the motor run.

Safety and risk assessment

We will be able to find the maximum torque

Steady state’

Transient accelerations

In order to characterize the motor