Concept Ideas for Rubik's cube solver

1 Hybrid Actuation

- 12 pneumatic valves for acceleration
- 6 electric actuators for retardation and stability

2 Assembly Line

- Accepts cubes in "any" size, color scheme, orientation and permutation
- A funnel or similar to accept multiple cubes in a que
- Deliver solved cubes back

3 Human - machine Interface

- 4 electric actuators grabbing the cube
- Another 2 or 4 actuators to move the grabbers linearly
- Must be able to accept human inputs, and make moves accordingly
- Move entire contraption about itself to allow change of view for human

4 Under water electric

- 6 electric actuators
- cube completely submersed in water

5 Under water hydraulic

- 12 hydraulic valves for actuation
- camera vision for PID feedback on rotations
- cube completely submersed in water

6 Work in vacuum

- cube being solved in vacuum
- 6 electric actuators

7 Cobots

- Solve the cube with 2 cobots. ie. UR5.
- Use ROS

8 Pneumatic actuation

- 12 pneumatic valves

- cube held in place by by 6 non-moving grippers

- camera vision used in regulating position

9 Magnetic actuation

- 6 coil circles around cube

- magnets inside cube-centers or cube-sides

- 1 or 6 grippers

10 Magnetic actuation inside cube

- 6 coil circles around shaft of center cubies

- magnetic shafts

- 1 or 6 grippers

11 Gloves

- Gloves to be used by a human

- Fingers being actuated to solve the cube

- camera vision on a headband