

Climb-Sense-Hold

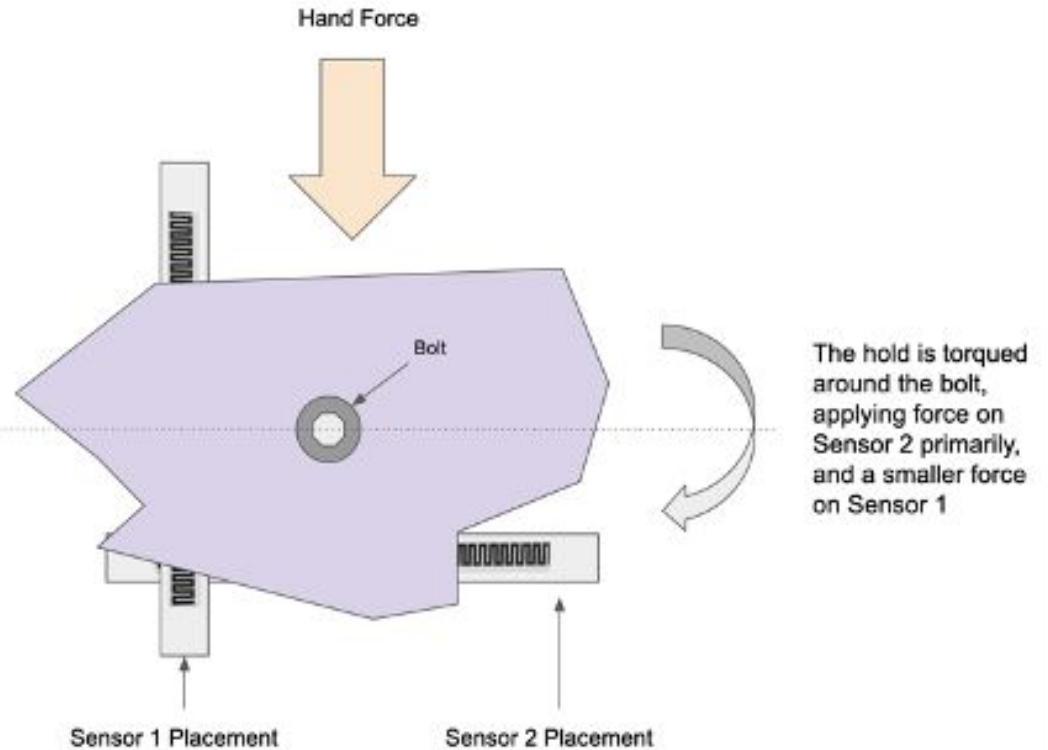
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Problem Statement

- Develop climbing holds that can sense when someone has grabbed them
- Use Case - moon boards for training
- Use Case - auto belay systems

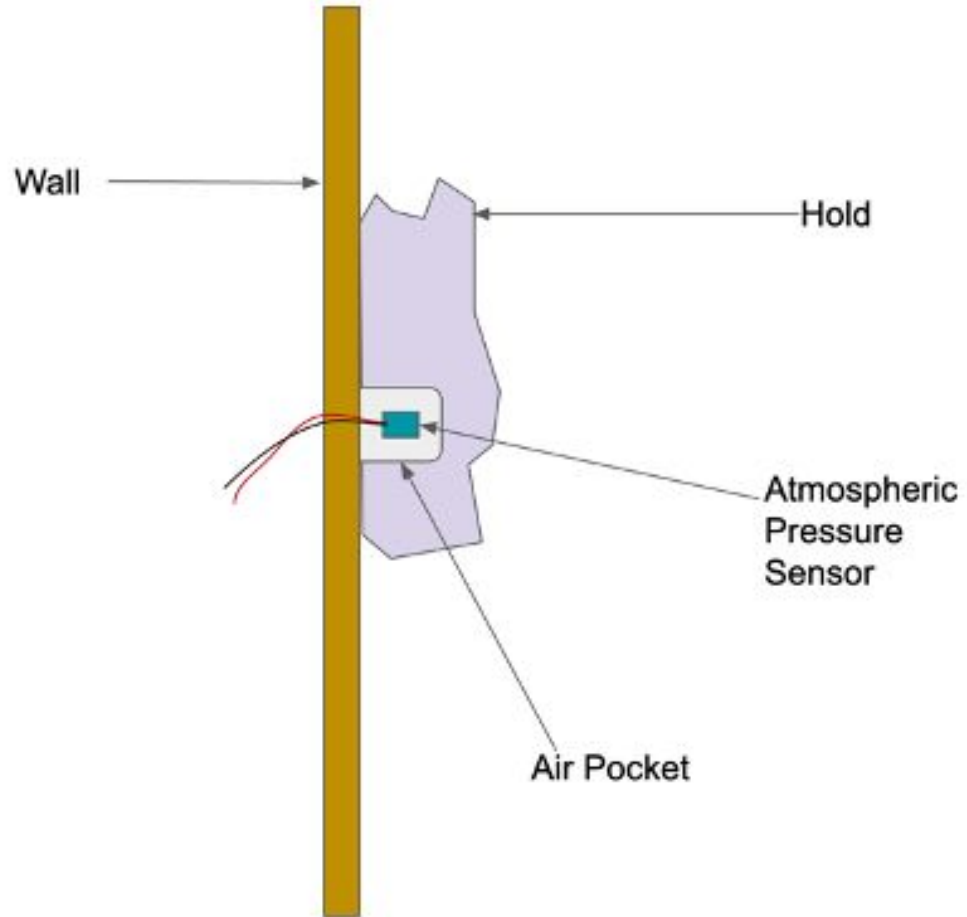
Prototyping

- Hard to orient
- Depends on tightness of bolt



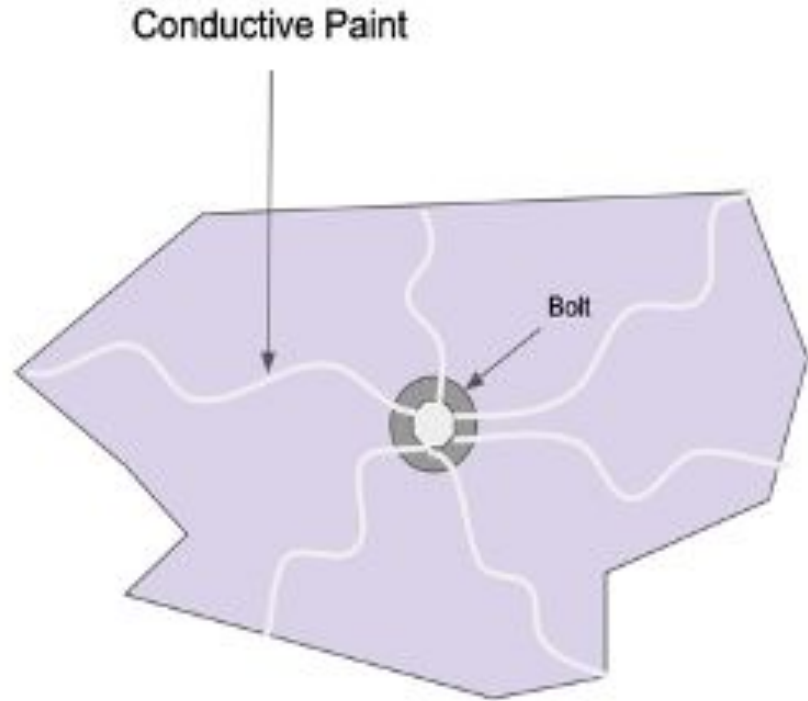
Prototyping

- No good way to seal off air pocket
- Material does not compress enough to notice a change



Prototyping

- Minimizes the amount of extra hardware on the wall
- Hard to make hold conductive - had to use conductive paint



Live Demo!



Lessons Learned + Future Work

Lessons

- Measure wires beforehand!
- Prototyping takes a lot of time

Future

- Patent?
- Make entire hold conductive instead of just paint
- Force sensing
- Detect climbing shoe

