Dexterity

Robotic Armature for Hazardous Materials Manipulation Operated via Haptic Interface Glove

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Background

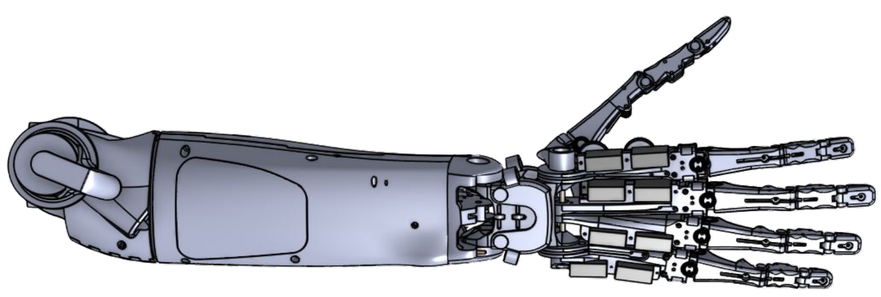
- Researchers need ways to handle hazardous contents remotely yet precisely
  - i.e. creating virus samples
- Commercial robotic handling systems may be prohibitively expensive for smaller labs

Objectives

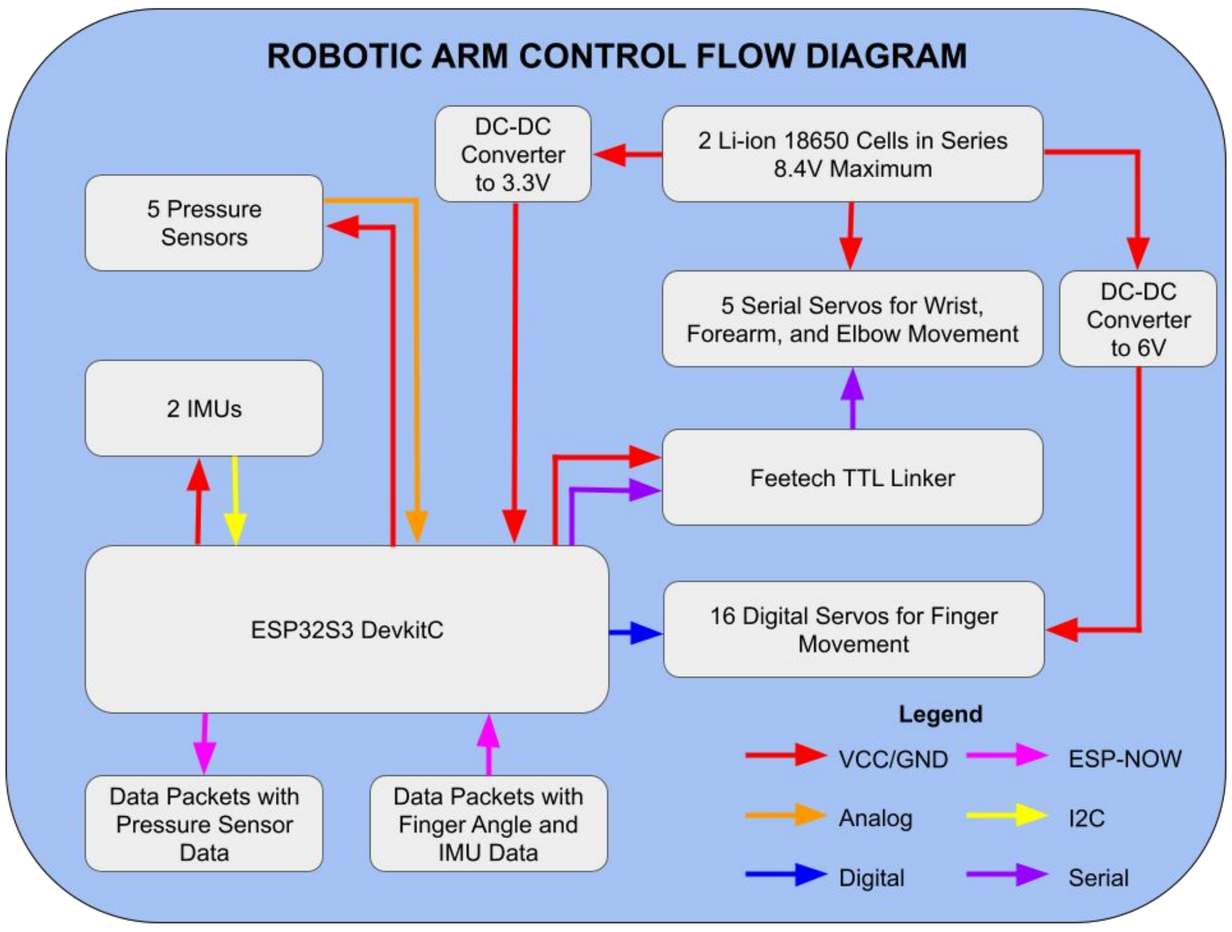
- Develop a haptic finger-tracking glove controlling a robotic hand
  - Enable the safe manipulation of virus handling equipment with human-like dexterity
  - Finger movement from the glove is tracked using IMUs, further driving robotic arm
  - Based on the open-source Dexhand Project
- Simulate sensation of object manipulation
  - Integration of touch sensors into the hand's fingertips drive haptic feedback system

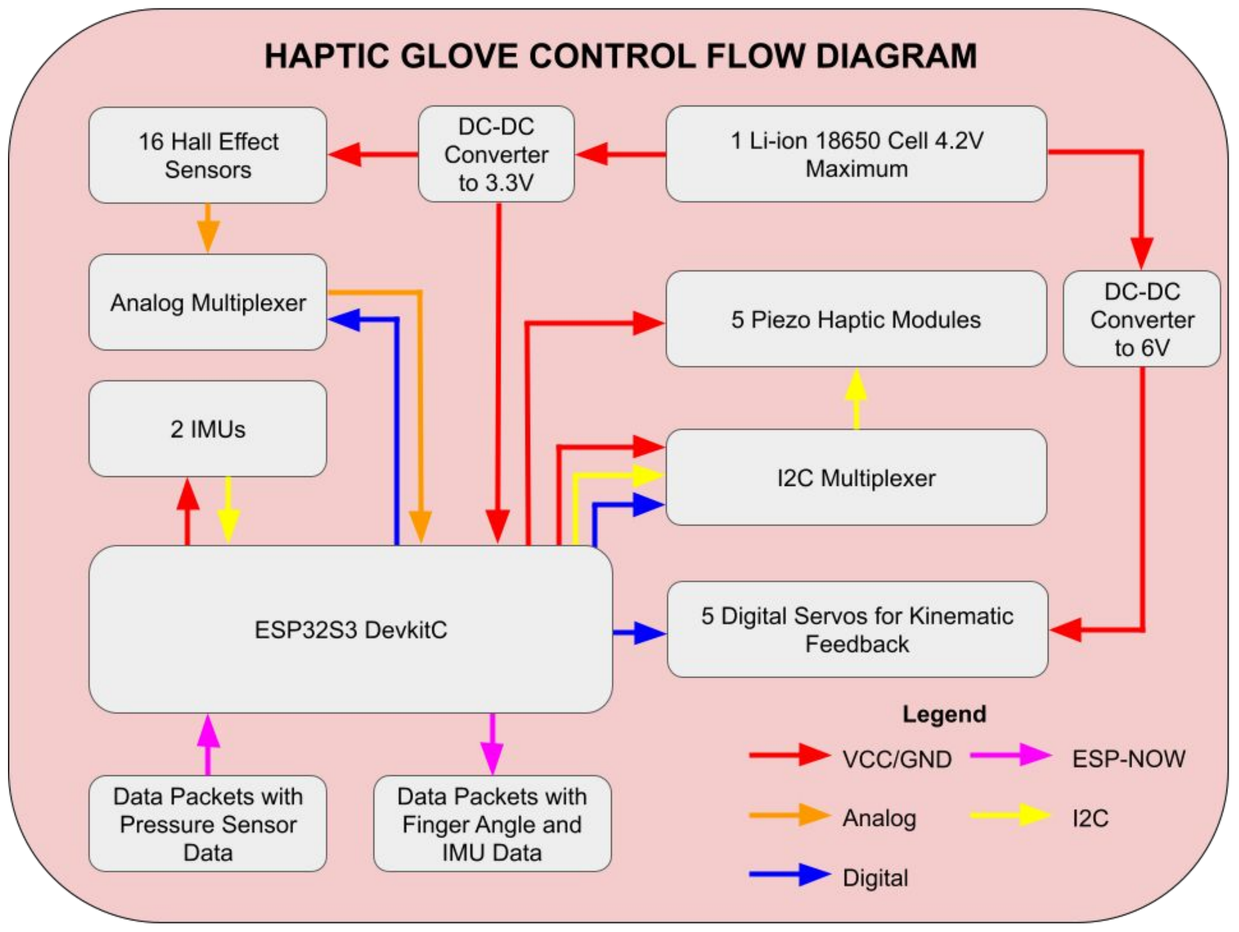
Deliverables

Glove Prototype



DexHand Robotic Armature





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