Smart Heated Jacket

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Motivation / Problem Statement

- 🌎 can get very cold 🥶
- Current solution -> lot of layers
- Not very comfy to wear 😵
- 💡 Generate heat instead of trapping heat == warmer

Modern Heated Jacket

Problems:

- Resistive wire -> uncomfortable, poor fit
- Limited Control of heat settings
- Resistive wires are notorious for dying after a few years

Proposed System

- Conductive Heater Fabric!
- By lining a jacket with fabric that conducts heat
  - The fit is not compromised
  - Areas of heat can be controlled better
  - Resistant to tears, no wires to rip
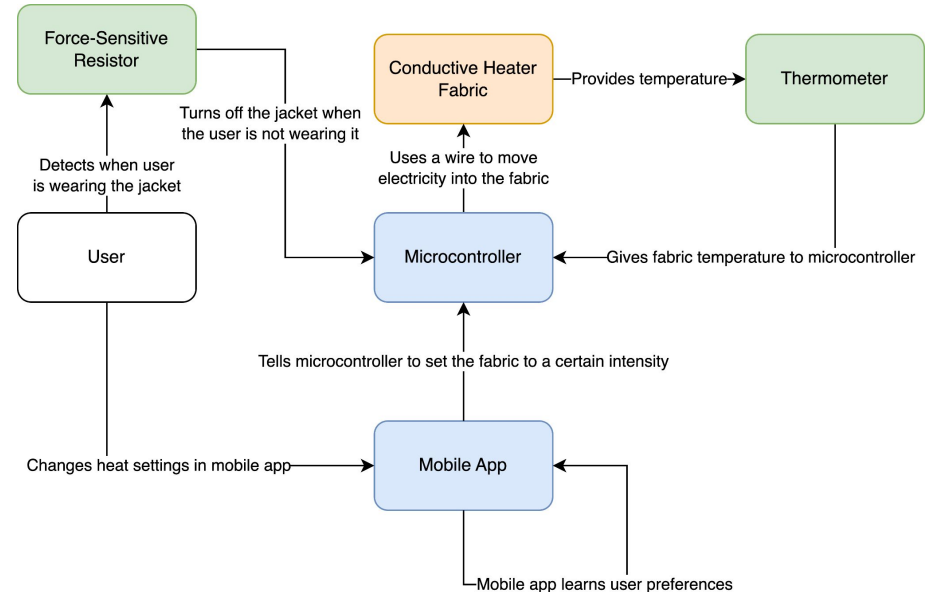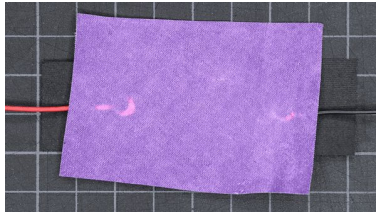
Scheduling and Resource Management

- How are you planning to verify your system?
  - Unit test every component
  - Integration test of the whole system in Illinois weather.
- Next steps and milestones until the end of the semester
  - Buy the materials
  - Write code
    - Drivers for heated fabric
    - Fault detection
    - Mobile app development
  - Integration test
  - Sew electronics into a jacket
- Required Hardware (Total Cost Before Tax and Shipping: $38.72)
  - EeonTex High-Conductivity Heater Fabric
  - Transistors
  - Thermometer
  - Force Sensitive Resistor
  - 4.7K Ohm Resistor
  - 1K Ohm Resistor
  - 10K Ohm Resistor
  - ADC