Wanderer

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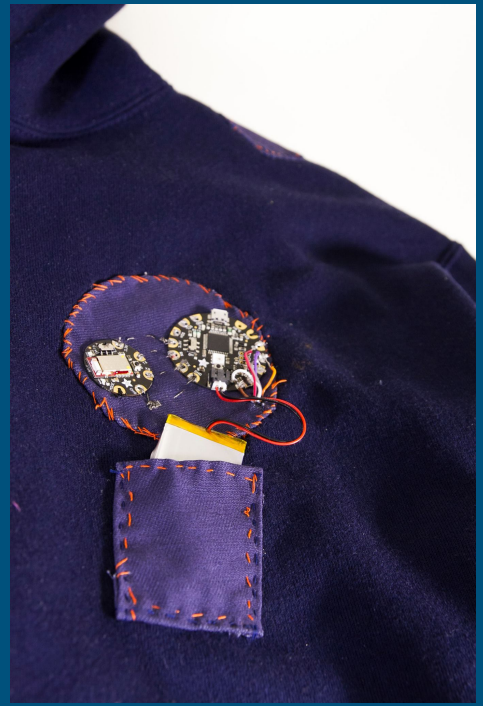
motivation

- *Experience* your surroundings
- Failures of current navigation
  - Device dependency
  - Digital apps are just models of the world
  - Direct routes: Quick, but not enjoyable
  - Blind to the world around you
- New form of communication
  - Display place-specific code that reflects where you've been
- User discussion: Technology that encourages a close connection with the world

design: hardware

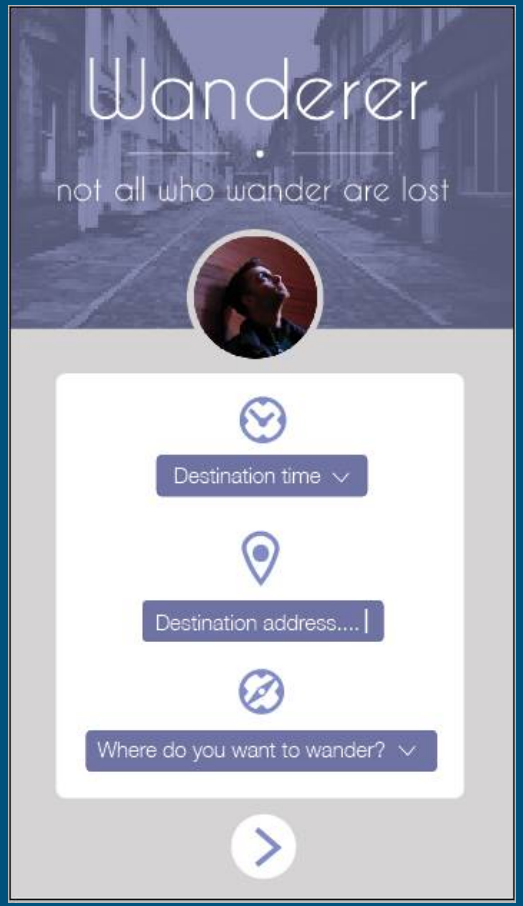
- Adafruit Flora MCU
- Flora Bluefruit LE Module
- Flora Compass Sensor
- Conductive Thread
- 3.7 V LiPo



- Three 15-piece NeoPixel Strips per Arm

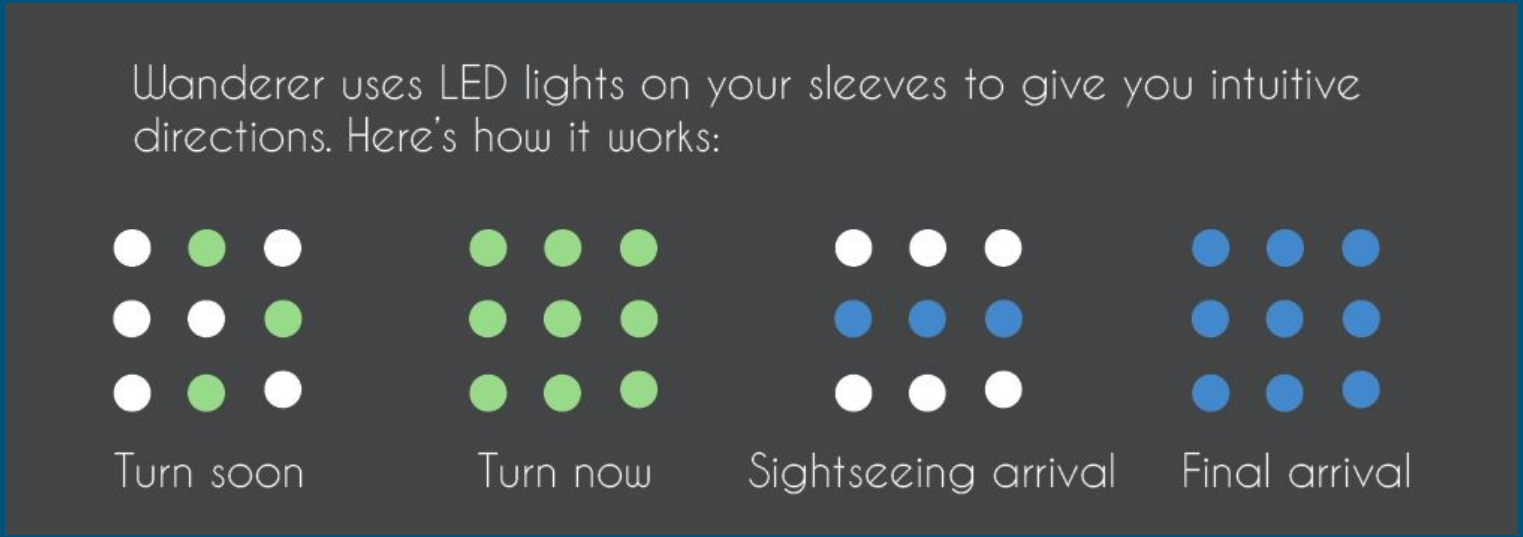
design: software

- iOS app + Google Maps API
- Enter destination or choose to roam free
- Choose preferred type of detour, or choose to go to randomly chosen places
- Put away your phone - the app communicates with the Wanderer jacket to take you on your journey



video

demo: contextual LED patterns



challenges + findings

- Conductive thread can be difficult (over 1.1v lost)
  - KNOW YOUR POWER NEEDS!
- Sewable hardware + soldering iron
- Hand-sewing is slow work
- Difficult to make sleek-looking encasements for fabric wearables
- 1 large NeoPixel array, rather than 3 smaller ones
- Coded direction list

improvements + next steps

- A more cohesive, branded, polished outer appearance
- Driving/Biking functionality
- Conductive thread instead of wiring; wearability
- Option for user input
  - Did the user like the detour?
  - Option to turn off LEDs