Problem: Hikers without cell service may find themselves in need of a ranger/paramedic or in need of some supplies.
Solution: An autonomous rover that patrols a hiking trail, stopping to assist hikers.

Uses cases (what the rover solves)

1. Hikers who are injured and can't move (need paramedics/assistance)

Maybe:

2. Hikers who need supplies/water
3. Hikers who are lost on the hike (need directions)

Features:

General:

- Can travel on predetermined path (50 feet test path at 3 MPH)
- Avoid obstacles (rocks, small branches, using ultrasonic sensors)
- Semi-rough terrain (test on Aldrich park)
- Detect hikers and stop moving (infrared sensors)

Solving #1

- UI panel on rover allows hiker to specify emergency, if any (to specify which ping)
- Ping base to send for assistance (for POC, just use WIFI)
- GPS receiver to send location for help to arrive

Stretch goals:

Solving #2

- Carry 3lb payload of various supplies (excluding rover weight)
- Supplies:
    - Standard water bottle (500mL) - 1.5 lbs
    - Bandaids (assorted medical supplies)

Solving #3

- Map on LCD screen