LineUp

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Penn Engineering

Problem

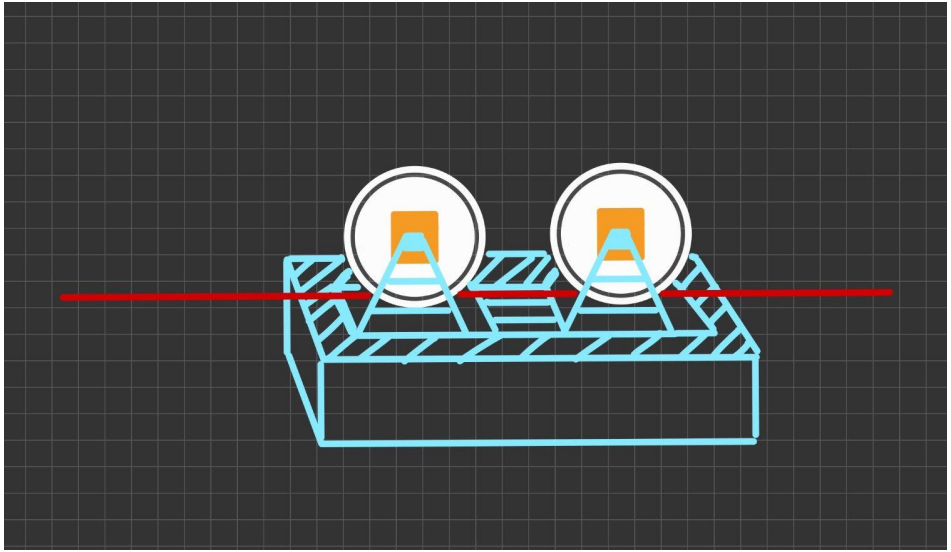
- Rural areas around the world have limited access to transportation. (Mountainous areas)
- Lack of roads, and railways.

Solution

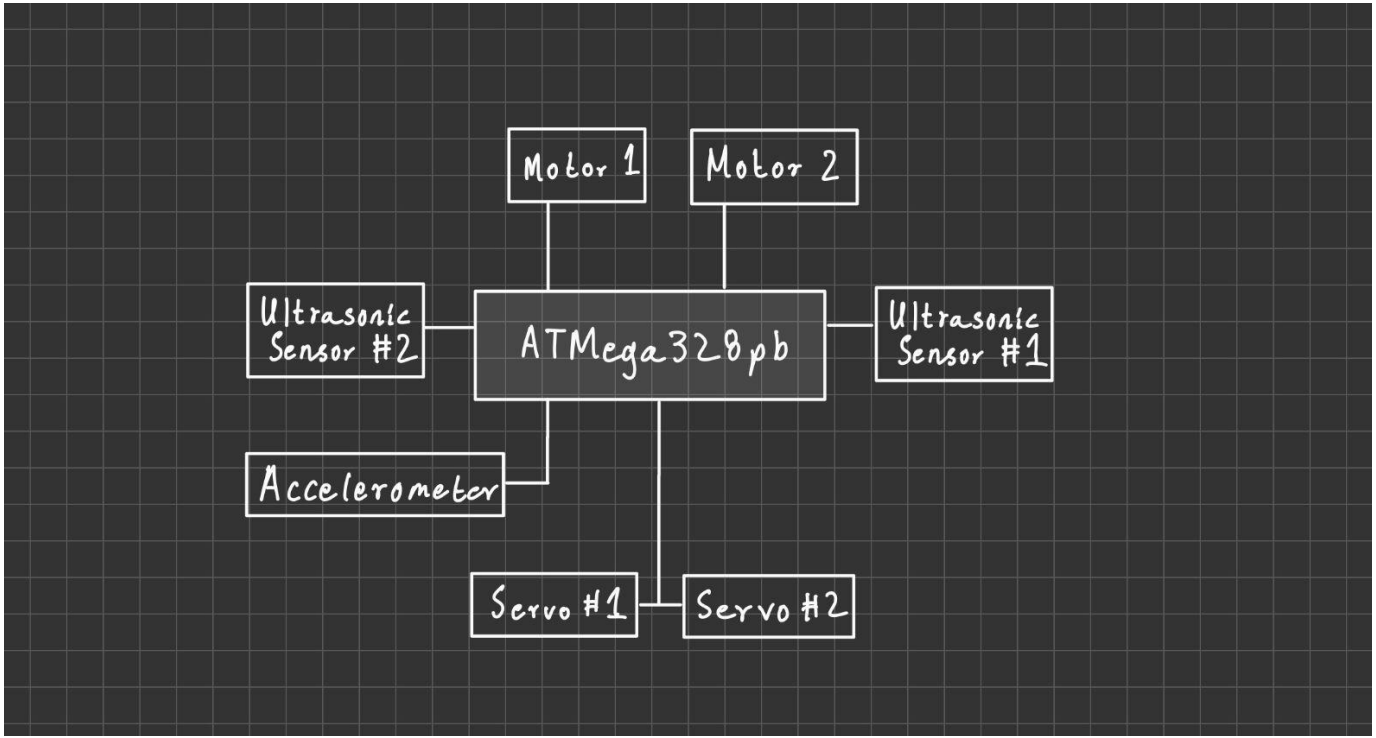
- Device will be placed on a zipline.
- Drop goods off at the end of the line and return.
- Vaccine delivery, crop dispersion, food distribution, and more!

Approach

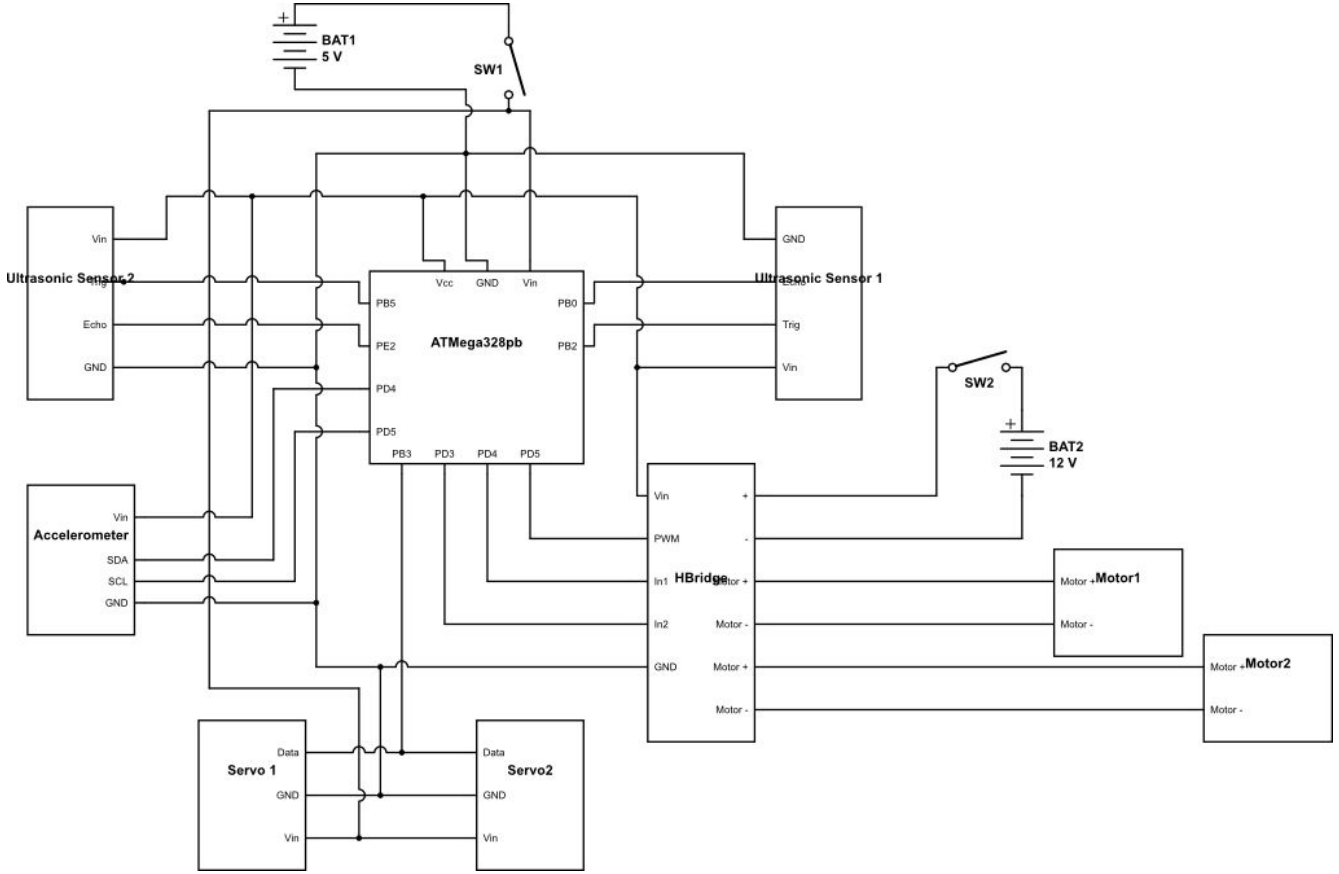
- Motorized wheels to slow down and speed up pulley
- Sensors to detect end of zipline
- Servo controlled delivery system



Block Diagram



Circuit Diagram



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Hardware Requirement

- 2 Servos.
- 2 Ultrasonic Sensors
- 2 Motors.
- Power Management

Software Requirement

- Communication: I2C
- Timer: PWM
- Interrupts: Input Capture

For the Future…

- Faster microcontroller.
- Stronger pulley system.
- 3D printed chassis.
- Lidar sensors.