

For the code, research was done to see how to control the amount of information coming in for a more steady and stable result. A list of websites and links will be included at the end of this document in that regard. also for the lights two libraries were considered, them being Adafruit NeoPixel and FastLED, the former being settled as best suited as it included an array of solid example works that were effectively edited to suit the requirements of our turn signals.

For none implemented features, research was done to see if implementation of a speedometer was possible. But we came to the conclusion that effectively it wasn't possible, as most methods needed magnets and other sensors around the wheel to gage speed. this went against the concept of maintaining all forms of interaction and sensors on the jacket. We also wanted to create an impact detection mechanic but ran out of time.

As for the materiality of Lightwear, we covered a couple of materials to see which most suited our vision. We wanted comfort, warmth, and water resistance without making the jacket feel heavy. With that in mind, we established a bomber jacket to be most suited and through research of materials, decided that a softshell with denim/corduroy as fabric would create a reasonable warmth, firmness, and a protection from rain. We visited Fabricville and Tonitex to feel out possible materials.

In terms in rallying information from the sensor to the Arduino, we decided that a wire was best suited. We envisioned radio/bluetooth options, but thought the energy consumption would be far too wasteful and conductive fabric proved to be too unstable in terms of information transmission for the time frame we had left.

Code Research:

[Ultrasonic Sensor](#) // [Barometric Sensor](#) // [LED Control](#) // [LED Control 2](#) // [LED Control 3](#) // [Distance Sensor](#) // [Collision Detection Warning](#) // [Velocity Measurement](#) // [Noise Removal](#)

Fabric Research:

[Fabricville](#) // [Tonitex](#) // [Bomber Jacket Creation](#)