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Assignment:

## **Project Constraints Essay**

GPS modules are useful to people throughout society. Currently, these systems are implemented in phones, smartwatches, cars and other technology. Implementing a sleek GPS card requires a developer to understand all aspects of the device and its potential uses. A user must be able to monitor their own objects while also following the environmental, ethical, security implications the technology has.

If a user wants to track a product, they must be able to find their devices easily and quickly. Our GPS modules must withstand the every day wear and tear, and receive a GPS signal with reasonable certainty. The GPS module should have a reasonable battery life to communicate with the application/server.

Ethically, these devices can be used to unethically track people and/or objects. This encourages the team to develop a way for people to discover the GPS device. Similarly, security becomes an important aspect because users do not want their data easily captured. Both of these cases require the team to be aware of fraudulent behaviors from both the end user and attackers. The team will need to develop ways to have 2-way encryption and device registration to ensure a GPS module only reports to the correct user.

As we develop our project, we fill focus on the usability of the product while minimizing environmental impact and prioritize ethically sourced parts..A user must be able to reach their product given most environments while still being protected from other users. Additionally, the application/server must use standard encryption software. Our module must be durable yet light, hardware/software security, and built ethically.