SE 101 Project proposal

Arduino bike anti-theft alarm

Jiahao Zhang j845zhan

Shazz Amin s35amin

Derek Yin h38yin

In this project, we try to create a bike alarm that can be activated and deactivated by the owner of the bike using his/hers smart phone.

Once activated, the alarm will look for movement using its **accelerometer** and notify the owner when necessary through cellular network (or Wi-Fi) using a **networking module**. This point is tricky, since we have to work out the best threshold of the accelerometer, so there won’t be any false alarm (by wind, etc). We will also need to learn how to send data through cellular network and how to receive it on our smart phone. Will this involve a server in the middle?

We will also make a mobile app to work with the alarm.

The above forms the base project.

Once the base project is fully functional and we still have time left, we will add a **beeper** to warn the theft; a **GPS module** to locate the bike and (highly unlikely) a **motor** and a **control module** to control an actual lock.