

Project Title: Vehicle Crash Detection System

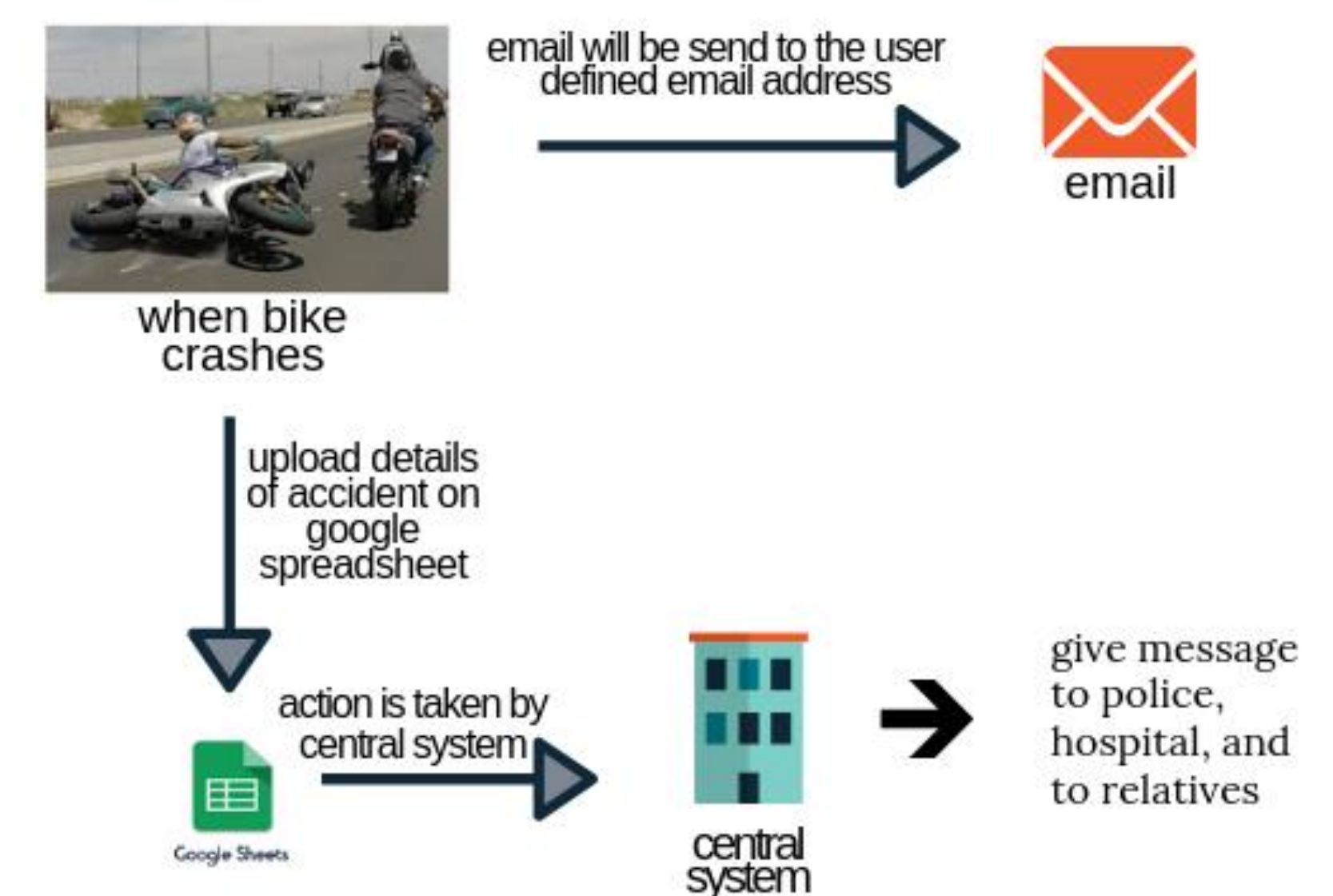
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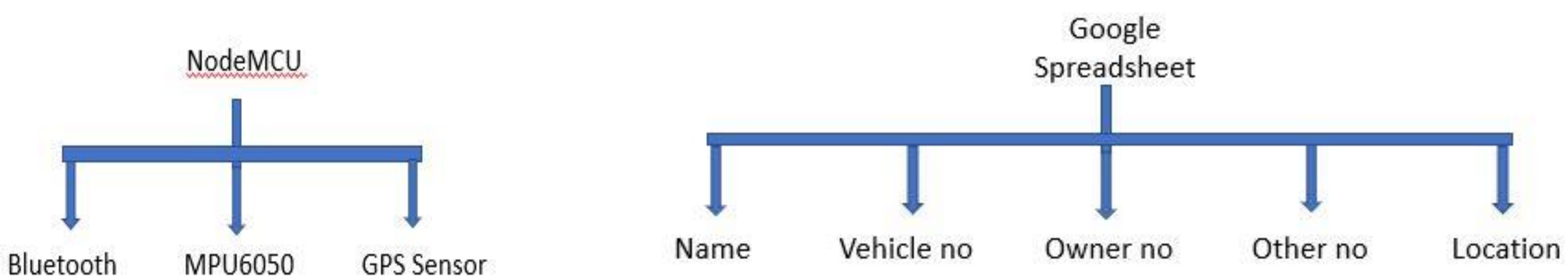
Concept:

- Using Bluetooth we get all the data needed from the app
- After establishing a connection to internet ESP continuously monitors acceleration along three axis and calculates all the angles(yaw, roll, pitch)
- It checks this data with different cases to predict an accident.
- If the accident is detected it uploads the info related to user and his location to the google spread sheet.
- The location can also be displayed on Google earth.



Methodology:

- Using MPU6050 we detect the accident of the bike and in car we use the crash sensor which is primarily used to inflate airbags.
- Bluetooth is used to connect the system to phone and get the relevant data.
- Using the app made by MIT app inventor we enter the details of the user and the relevant details of the preferential network.
- GPS is used to detect the location of the vehicle .
- After the accident is detected by the MPU6050 it sends all the details to the google spreadsheet.



Novelty:

- The system can connect to either the local access point created by user or to any central network available. (eg Binatone in Punjab)
- Provides details of the owner of vehicle along with the contact numbers of the user and the **location** where accident will occur.
- Email will be send to the provided email address.
- Easy to implement and install.

Industrial / Social Impact: A high percentage of deaths in road crashes occur as the victims do not get timely medical treatment. Our project helps to predict these crashes and informs authorities about the accident so that appropriate action can be taken

Technical and Commercial Feasibility: The project was designed to be cheap ,reliable and easily implementable.

Same system can be installed on car and bike without any changes to the algorithm.

Any other relevant information, which can support your project

The project can be further expanded to include vehicle to vehicle communication through cloud and including IR sensors and lidar to give vehicles an estimation of their location with respect to each other to prevent crash from happening. Such a system requires very high data rates as compared to current standards.

