Technique

Bluetooth beacons which is a Bluetooth low energy device that broadcast their identifier to nearby smartphones. It will get information about a person's location and mac address and then send them alerts via mobile app.

How to Use it

- Bluetooth beacons will be set up in certain spots inside the hall, and attendants should install a mobile application to send alerts to them.
- smartphones of attendants should give permission to Bluetooth beacons to access their Bluetooth and retrieve the mac address
- once one of the Bluetooth beacons detects more than certain number of people(it could be 5 or 10) in it's range, it should retrieve the mac addresses of their smartphones Bluetooth and store it in a database, also it should retrieve the location of attendants based on how far their smartphones are from a certain Bluetooth beacon
- in case there are no internet connection the information should be stored in local database, once it connects to the internet it should store it in online database.

Stages of Work

Robot Engineers:

- Should connect the Bluetooth beacons to Arduino
- Should program the Arduino such that whenever the Bluetooth beacons detects more than 5 smartphones Bluetooth in its range, it should retrieve the mac addresses and stores them in the database

IOT Engineers:

- Should create a database that allows to store information such as: mac address and location
- Should connect the database to the Arduino
- Should build mobile app which connects to the database
- Should send notification from the app to attendants whose mac addresses are stored in the database

AI Engineers:

- Should write an algorithm to calculate the distance between the Bluetooth beacon and the smartphone to retrieve the location of the attendant.

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