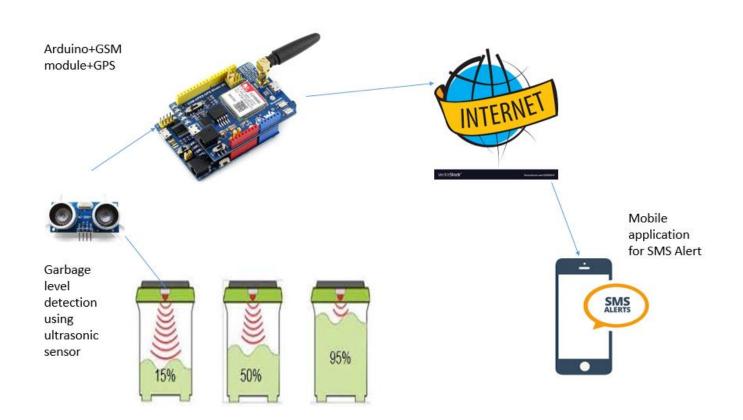
## Project Design Phase-II Technology Stack (Architecture & Stack)

Date	16 October 2022
Team ID	PNT2022TMID06419
Project Name	Project – Smart Waste Management for metropolitan cities
Maximum Marks	4 Marks

## **Technical Architecture:**



**Table-1 : Components & Technologies:** 

S.No	Component	Description	Technology	
1.	Arduino	Open source electronic platform based on easy to use hardware and software	C programming	
2.	Ultrasonic sensor	It measures distance of the targeted object	Using an retro-reflective sensor	
3.	GPS Module	This module receives a certain location from satellite	m Uses the trilateration technique	
4.	GSM Module	This module is designed for wireless radiation monitoring through short message service (SMS)	Uses narrowband Time Division multiple access technique for transmitting signals	
5.	Cloud database	A cloud database typically runs on a cloud computing platform and access to the database is provided as a service	IBM cloud services	
6.	MIT Inventor app	It is an intuitive, visual programming environment that allow to build fully functional apps for smartphones	Block-Based programming language	

## **Table-2: Application Characteristics:**

S.No	Characteristics	Description	Technology
1.	Open-Source Frameworks	Arduino IDE	C programming
2.	Security Implementations	Firewalls	Encryptions
3.	Availability	Easily available and it can be easily installed and can easily provide alert messages	GSM module is to provide SMS
4.	Performance	Any number of dustbins can be installed and the details of all these garbage cans is found under one server	GPS module is used to detect the location of the bins.