

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

Date	15-05-2023
Team ID	Au513220106312
Project Name	AI enabled car parking using openCV

Technical Architecture:

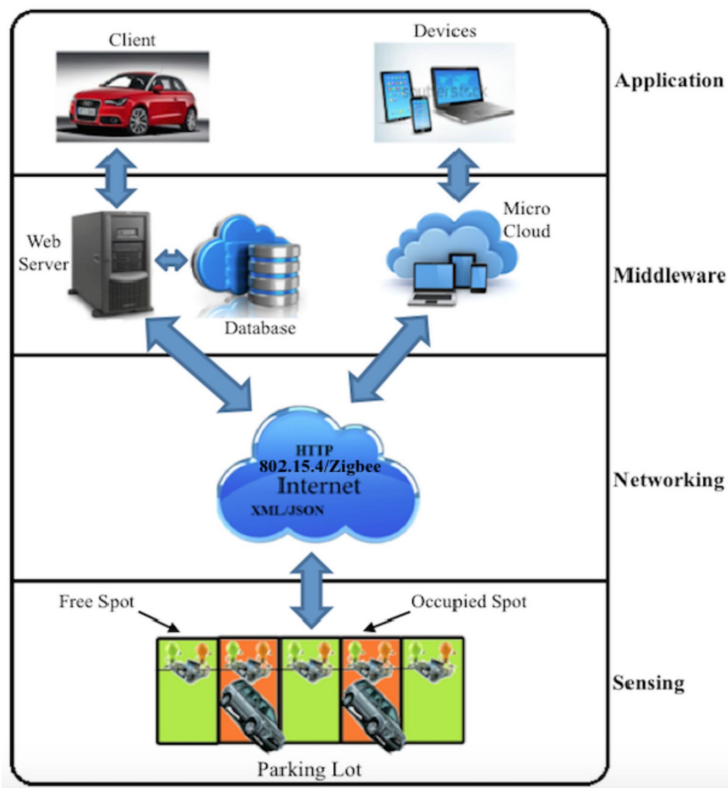


Table-1 : Components & Technologies:

S.No	Component	Description	Technology
1.	User Interface	The user interact with the web ui	HTML.
2.	Application Logic-1	Getting user input image	Python
3.	Application Logic-2	Getting model output for damage prediction	IBM Watson STT service
4.	Application Logic-3	Getting model output for cost estimation	IBM Watson Assistant
5.	Database	Data Type-image and user input details are stored	MySQL, NoSQL, etc.
6.	Cloud Database	Database Service on cloud	IBM DB2, IBM Cloudant etc.
7.	File Storage	Received user details and received user input image of the vehicle is stored in cloud	IBM Block Storage

8.	External API-1	Purpose of External API used in the application	IBM Weather API, etc.
9.	External API-2	Purpose of External API used in the application	Aadhar API, etc.
10.	Machine Learning Model	Purpose of the AI model is for estimating the cost of parking	Object Recognition Model.
11.	Infrastructure (Server / Cloud)	On cloud server we will be deploying the ai model using flask in the webpage	Flask.

Table-2: Application Characteristics:

S.No	Characteristics	Description	Technology
1.	Open-Source Frameworks	open-source frameworks used in ibm Watson	Technology of Opensource framework IBM WATSON
2.	Security Implementations	IBM cloud	Certified Watson assistant for Encrypted file systems, Encrypted storage systems, Key management systems.
3.	Scalable Architecture	Web server - static and dynamic website content present in the website will be update based upon user demands and suggestion Application server - updation of the basic functionality of the website and integration of new logic within the website can be done Database server - based upon the varying inputs given by the user the database will be modified constantly	IBM watson assistant,python,MySQL
4.	Availability	The AI model is made available instantly to user at any point of time	IBM Watson cloud assistant
5.	Performance	IBM Watson –automate processes, The deep learning model is trained using IBM Watson studio for better performance and quick accessibility	IBM Watson assistant