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

| Date | 06 May 2023 |
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| Team ID | NM2023TMID01151 |
| Project Name | AI Enabled Car Parking using open CV |

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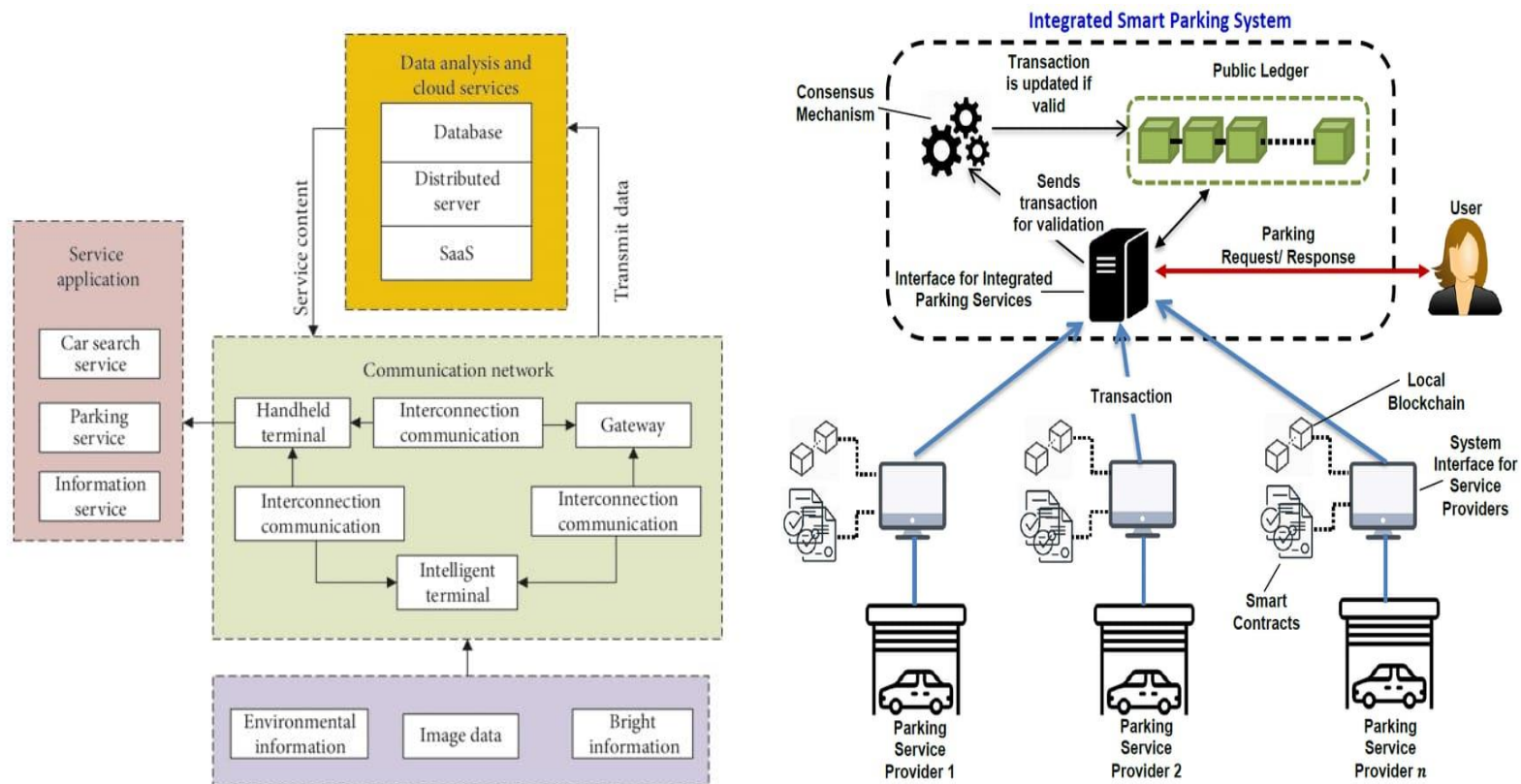
**Table-1 : Components & Technologies:**

| S.No | Component | Description | Technology |
|---|---|---|---|
| 1. | User Interface | Mobile App or Web Server | Back End : Java<br>Front End : JavaScript |
| 2. | Application Logic-1 | Logic for a process in the application Back End | Java |
| 3. | Application Logic-2 | Logic for a process in the application Front End | JavaScript |
| 4. | Application Logic-3 | Logic for a process in the application Cloud Service | AWS Services |
| 5. | Database | Data Type, Configurations etc. | MySQL |
| 6. | Cloud Database | Database Service on Cloud | AWS Services |
| 7. | File Storage | File storage requirements | AWS Block Storage |
| 8. | External API-1 | Purpose of External API used in the application | AWS Weather API |
| 9. | External API-2 | Purpose of External API used in the application | Hipe |
| 10. | Machine Learning Model | Purpose of Machine Learning Model | Edge Computing, Deep learning algorithm |
| 11. | Infrastructure (Server / Cloud) | Cloud Server Configuration | Kafka, Storm, HDFS(Hadoop Distributed File System), Cloud API |

**Table-2: Application Characteristics:**

| S.No | Characteristics | Description | Technology |
|---|---|---|---|
| 1. | Open-Source Frameworks | open-source frameworks | Hadoop |
| 2. | Security Implementations | Firewalls | Bitdefender BOX |

| S.No | Characteristics | Description | Technology |
|------|----------------|-------------|------------|
| 3. | Scalable Architecture | 3 – tier services | Kafka, Storm, HDFS(Hadoop Distributed File System), Cloud API (Hive) |
| 4. | Availability | Distributed servers | User dataDao |
| 5. | Performance | Design consideration for the performance of the application | RecommendImpl, Algorithm_drools |