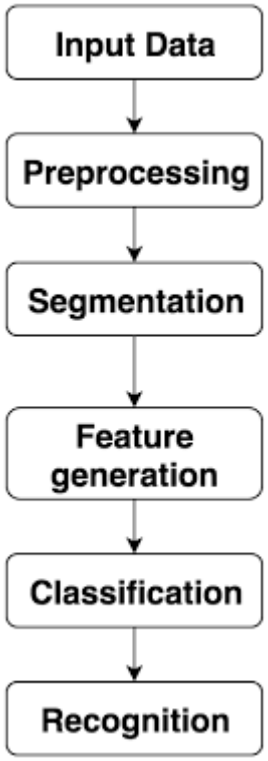
**Project Design Phase-II**
**Technology Stack (Architecture & Stack)**

| | |
|---|---|
| Team ID | PNT2022TMID30607 |
| Project Name | Project – A Novel Method For Handwritten Digit Recognition System |
| Maximum Marks | 4 Marks |

**Technical Architecture:**



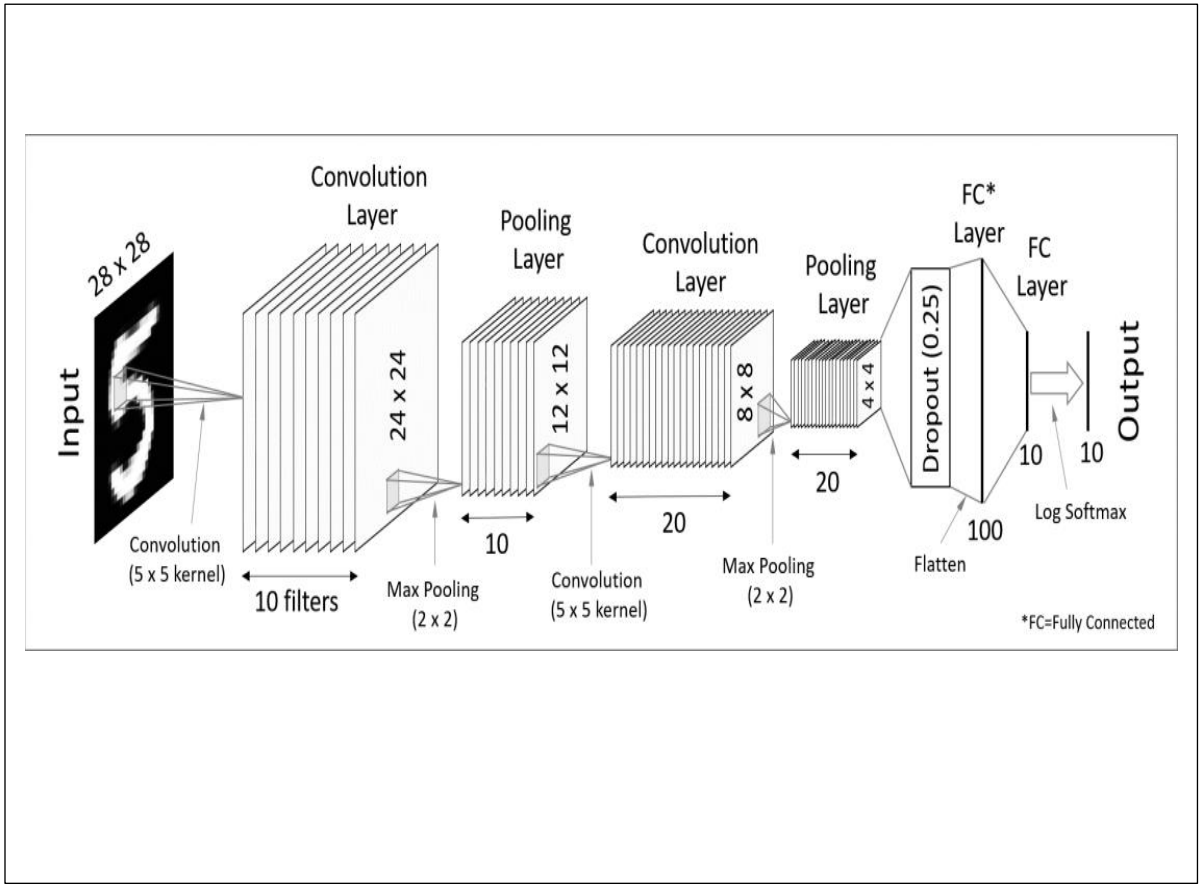



**Table-1 : Components & Technologies:**

| S.No | Component | Description | Technology |
|---|---|---|---|
| 1. | User Interface | How user interacts with application e.g.<br>Web UI, Mobile App, Chatbot etc. | HTML, CSS, JavaScript |
| 2. | Application Logic-1 | Logic for a process in the application | Python |
| 3. | Application Logic-2 | Logic for a process in the application | IBM Watson STT service |
| 4. | Application Logic-3 | Logic for a process in the application | IBM Watson Assistant |
| 5. | Database | Data Type, Configurations etc. | MySQL, NoSQL, etc. |
| 6. | Cloud Database | Database Service on Cloud | IBM DB2, IBM Cloudant |
| 7. | File Storage | File storage requirements | IBM Block Storage |
| 8. | External API-1 | Purpose of External API used in the application | IBM Weather API |
| 9. | External API-2 | Purpose of External API used in the application | Aadhar API |
| 10. | Machine Learning Model | Purpose of Machine Learning Model | Object Recognition Model |
| 11. | Infrastructure (Server / Cloud) | Application Deployment on Local System / Cloud<br>Local Server Configuration:<br>Cloud Server Configuration : | Local, Cloud Foundry |

**Table-2: Application Characteristics:**

| S.No | Characteristics | Description | Technology |
|---|---|---|---|
| 1. | Open-Source Frameworks | List the open-source frameworks used | Technology of Opensource framework |
| 2. | Security Implementations | List all the security / access controls implemented, use of firewalls etc. | SHA-256, Encryptions, IAM Controls, OWASP |
| 3. | Scalable Architecture | Justify the scalability of architecture (3 – tier, Micro-services) | 3 – tier, Micro-services |

| S.No | Characteristics | Description | Technology |
|---|---|---|---|
| 4. | Availability | Justify the availability of application (e.g. use of load balancers, distributed servers etc.) | Distributed servers, IBM cloud |
| 5. | Performance | Design consideration for the performance of the application (number of requests per sec, use of Cache, use of CDN's) etc. | Number of requests per sec, use of Cache, use of CDN's |