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

| Date | 28 June 2025 |
|---------------|---------------------------------------------------------------------------------------------------|
| Team ID | LTVIP2025TMID35333 |
| Project Name | Revolutionizing Liver Care: Predicting Liver Cirrhosis using Advanced Machine Learning Techniques |
| Maximum Marks | 4 Marks |

Technical Architecture:

The Deliverable shall include the architectural diagram as below and the information as per the table 1 & table 2

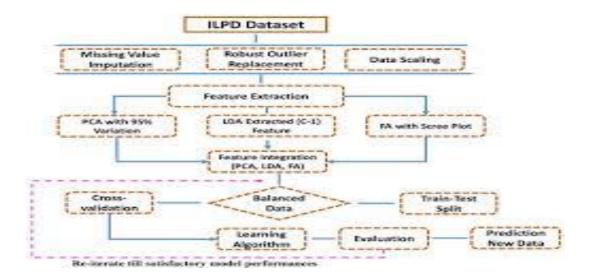


Table-1 : Components & Technologies

| 1. | User Interface | How user interacts with application e.g. Web UI, Mobile App, Chatbot etc. | HTML, CSS, JavaScript / Angular Js / React Js etc. |
|----|---------------------------------|---------------------------------------------------------------------------|-------------------------------------------------------------------|
| 2. | Application Logic-1 | Logic for a process in the application | Java / 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 etc. |
| 7. | File Storage | File storage requirements | IBM Block Storage or Other Storage Service or Local Filesystem |
| 8. | Machine Learning Model | Purpose of Machine Learning Model | Object Recognition Model, etc. |
| 9. | Infrastructure (Server / Cloud) | Application Deployment on Local System / Cloud | Local, Cloud Foundry, Kubernetes, etc. |

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. | e.g. SHA-256, Encryptions, IAM Controls, OWASP etc. |
| 3. | Scalable Architecture | Justify the scalability of architecture (3 – tier, Micro-services) | Technology used |

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

Reference:

https://wsww.atlassian.com/agile/project-management

https://www.atlassian.com/agile/tutorials/how-to-do-scrum-with-jira-software

https://www.atlassian.com/agile/tutorials/epics

https://www.atlassian.com/agile/tutorials/sprints

https://wsww.atlassian.com/agile/project-management