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

Date	31 January 3035
Team ID	LTVIP2026TMIDS85825
Project Name	Prosperity Prognosticator – Machine Learning for Startup Success Prediction
Maximum Marks	4 Marks

Technical Architecture:

The Deliverable shall include the architectural diagram as below and the information as per the table1 & table 2

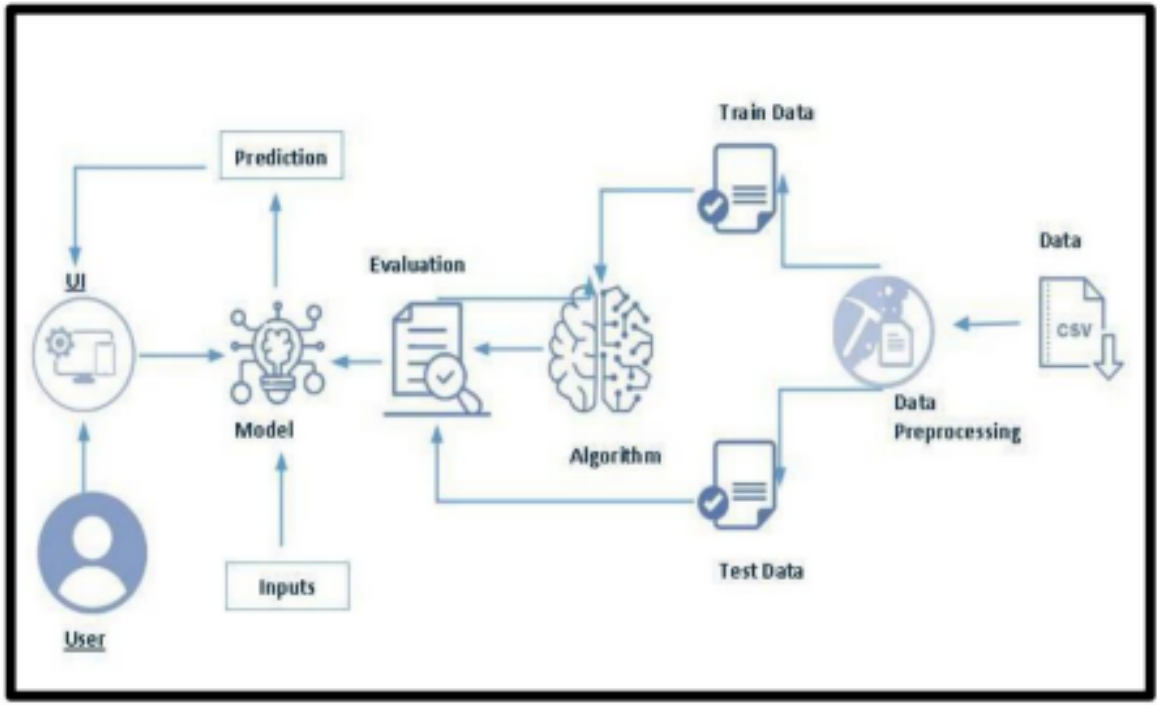

Table-1 : Components & Technologies:

S.No	Component	Description	Technology
1	User Interface	Interface for users to input startup data and view predictions	HTML, CSS, JavaScript, React
2	Application Logic-1	Handles user authentication and dashboard operations	Python (Flask / Django)
3	Application Logic-2	Processes startup data and performs ML predictions	Python, Scikit-learn
4	Application Logic-3	Generates reports and analytics	Python
5	Database	Stores user data, startup details, prediction results	MySQL
6	Cloud Database	Stores scalable datasets and backups	AWS RDS / MongoDB Atlas
7	File Storage	Stores datasets and trained ML models	Local File System / AWS S3
8	External API-1	Authentication and email notifications	Gmail API
9	External API-2	Data enrichment (optional market data)	Public Startup Data APIs
10	Machine Learning Model	Predicts startup success probability	Logistic Regression, Random Forest
11	Infrastructure (Server / Cloud)	Application deployment and hosting	Local Server / AWS Cloud

Table-2: Application Characteristics:

S.No	Characteristics	Description	Technology
1	Open-Source Frameworks	Frameworks used to develop the application	Flask, React, Scikit-learn
2	Security Implementations	Secure authentication and data protection	Password Hashing, JWT, HTTPS
3	Scalable Architecture	Supports growth in users and data	Three-tier Architecture
4	Availability	Ensures application uptime	Cloud Hosting
5	Performance	Fast response time for predictions	Optimized ML Models, Caching

References

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5. AWS Architecture Reference
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6. C4 Model – Visualizing Software Architecture
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   https://www.draw.io
8. Miro Templates – Design Thinking Tools
   https://www.miro.com/templates/
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11. Medium – Data Flow Diagram and System Design Concepts
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