

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

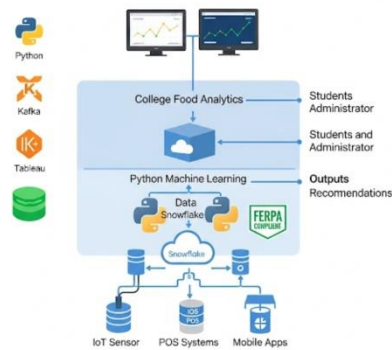
Date	12 <sup>th</sup> June 2035
Team ID	LTVIP2025TMID48638
Project Name	Comprehensive Analysis and Dietary strategies with tableau: A college food case study.
Maximum Marks	4 Marks

### Technical Architecture:

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

**Example: Comprehensive Analysis and Dietary strategies with tableau: A college food case study**

College Food Food Choice Analysis



**Table 1:**

S.No	Component	Description	Technology
1.	User Interface	How user interacts with application	. React JS, HTML5, CSS3
2.	Application Logic-1	Logic to process and analyze user input	Python (Flask/Django)
3.	Application Logic-2	Data visualization and dashboard logic	Tableau Public / Tableau Desktop
4.	Application Logic-3	Recommendation logic for dietary suggestions	Python with Scikit-learn
5.	Database	Storage of user inputs, food logs, and feedback	MySQL
6.	Cloud Database	Scalable cloud-based data storage	. Firebase / AWS RDS
7.	File Storage	Store uploaded food photos or reports	AWS S3 / Local Filesystem
8.	External API-1	Nutrition analysis API for food logging	Edamam Nutrition API
9.	External API-2	GPA and academic data for correlation	University Academic Portal API
10.	Machine Learning Model	Suggest healthy eating patterns	. Diet Recommendation ML Model (Sklearn)
11.	Infrastructure (Server / Cloud)	Cloud-based deployment	AWS EC2 / Azure Web Apps

**Table-2: Application Characteristics:**

S.No	Characteristics	Description	Technology
1.	Open-Source Frameworks	Front-end and back-end frameworks	React JS, Flask, Python, MySQL
2.	Security Implementations	Authentication, encryption, access control	O Auth 2.0, SHA-256, HTTPS, Firebase Auth
3.	Scalable Architecture	Expandable across institutions using micro services	3-tier Architecture with Docker
4.	Availability	High availability with distributed architecture	AWS Load Balancer, Multi-Zone Deployment
5.	Performance	Fast rendering and data fetch	CDN, Tableau Extracts, In-memory cache