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

Date	03 October 2022
Team ID	Team-592521
Project Name	Project – Online Shoppers Intention 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

Example: Order processing during pandemics for offline mode

Reference: https://developer.ibm.com/patterns/ai-powered-backend-system-for-order-processing-during-pandemics/

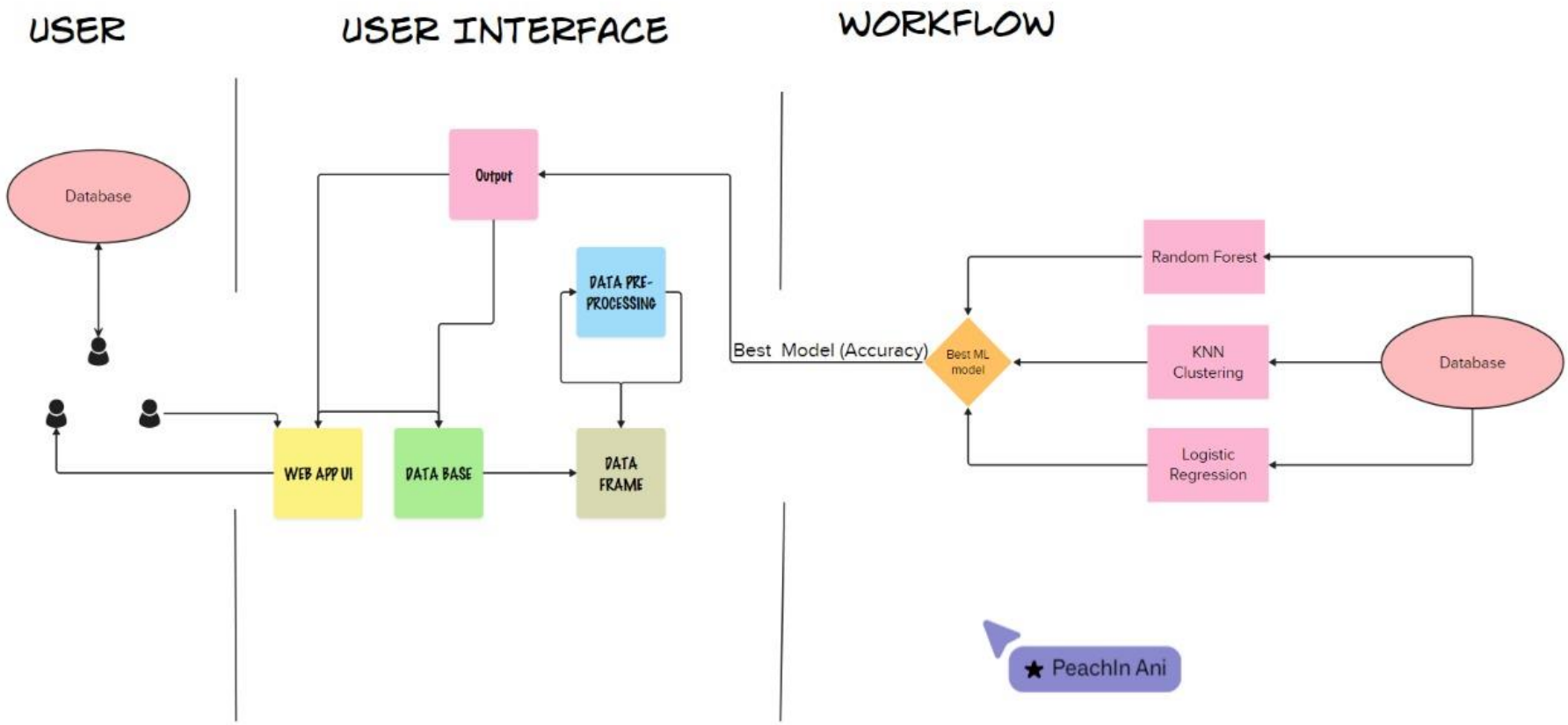
USER
USER INTERFACE
WORKFLOW
Database
Output
DATA PRE-PROCESSING
WEB APP UI
DATA BASE
DATA FRAME
Best Model (Accuracy)
Best ML model
Random Forest
KNN Clustering
Logistic Regression
Database
PeachIn Ani

Table-1 : Components & Technologies:

S.No	Component	Description	Technology
1	User Interface	Interaction with the application	HTML, CSS, JavaScript/React Native, Flutter
2	Application Logic-1	General application logic	Java/Python
3	Application Logic-2	Machine Learning for shopper intentions	Logistic Regression, Random Forest, K-Means
4	Database	Data storage	MySQL, NoSQL
5	External API-1	Payment Gateway API	Stripe, PayPal (optional)
6	Machine Learning Model	Logistic Regression for classification	Integrated into the application
7	Machine Learning Model	Random Forest for ensemble learning	Integrated into the application
8	Machine Learning Model	K-Means for customer clustering	Integrated into the application
9	Infrastructure	Application deployment	Cloud (AWS, Azure, Google

Table-2: Application Characteristics:

S.No	Characteristics	Description	Technology
1	Open-Source Frameworks	List of open-source frameworks used	Technology of Open-source framework
2	Security Implementations	Security measures and access controls implemented	e.g., SSL, OAuth, Encryption, IAM Controls
3	Scalable Architecture	Justification for scalability (Serverless, Microservices)	Technology used for scalability
4	Availability	Justification for application availability	e.g., load balancing, failover mechanisms
5	Performance	Design considerations for application performance	e.g., response time, CDN usage

References:

https://c4model.com/

https://developer.ibm.com/patterns/online-order-processing-system-during-pandemic/

https://www.ibm.com/cloud/architecture

https://aws.amazon.com/architecture

https://medium.com/the-internal-startup/how-to-draw-useful-technical-architecture-diagrams-2d20c9fda90d