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

Date	9th November 2023
Team ID	592380
Project Name	Online Payments Fraud Detection Using ML
Maximum Marks	4 Marks

Technical Architecture:

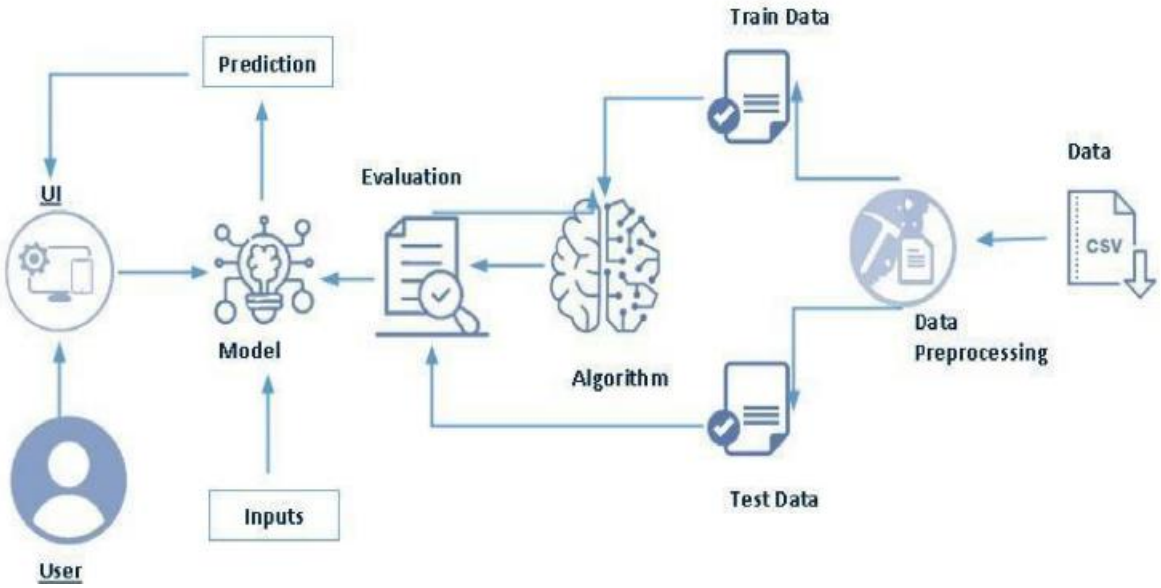

Table-1 : Components & Technologies:

S.No	Component	Description	Technology
1.	User Interface	How user interacts with application	HTML, CNN
2.	Application Logic-1	Used to detect whether a payment method is fraud or not	Python
3.	Application Logic-2	Logic for a process in the application	CNN
5.	Database	Collection of data	Kaggle etc.
10.	Machine Learning Model	Using a better Machine Learning model which suis for data	Decision tree,Random Tree Classifier,svc etc.
11.	Infrastructure	Deploy a website which can detect this	Use web development to do this

Table-2: Application Characteristics:

S.No	Characteristics	Description	Technology
1.	Open-Source Frameworks	Flask (Python web framework), scikit-learn (for machine learning algorithms), TensorFlow (for machine learning models), NumPy (for numerical operations), Pandas (for data manipulation)	Python web framework, scikit-learn, NumPy,Pandas
2.	Security Implementations	IAM Controls (Identity and Access Management), SSL/TLS for secure communication, OWASP (Open Web Application Security Project) guidelines for web application security	e.g. Encryptions, IAMControls, OWASP etc.
3.	Scalable Architecture	Docker for containerization, Kubernetes for orchestration and management of containerized applications	Docker,Kubernetes

S.No	Characteristics	Description	Technology
4.	Availability	Load balancers for even distribution of requests, Distributed servers for high availability,	Load Balancers,Distributed Servers
5.	Performance	Performance monitoring tools for optimizing and maintaining high performance	CDNs etc