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

Date	15 October 2022
Team ID	PNT2022TMID33252
Project Name	University admit eligibility predictor
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/**

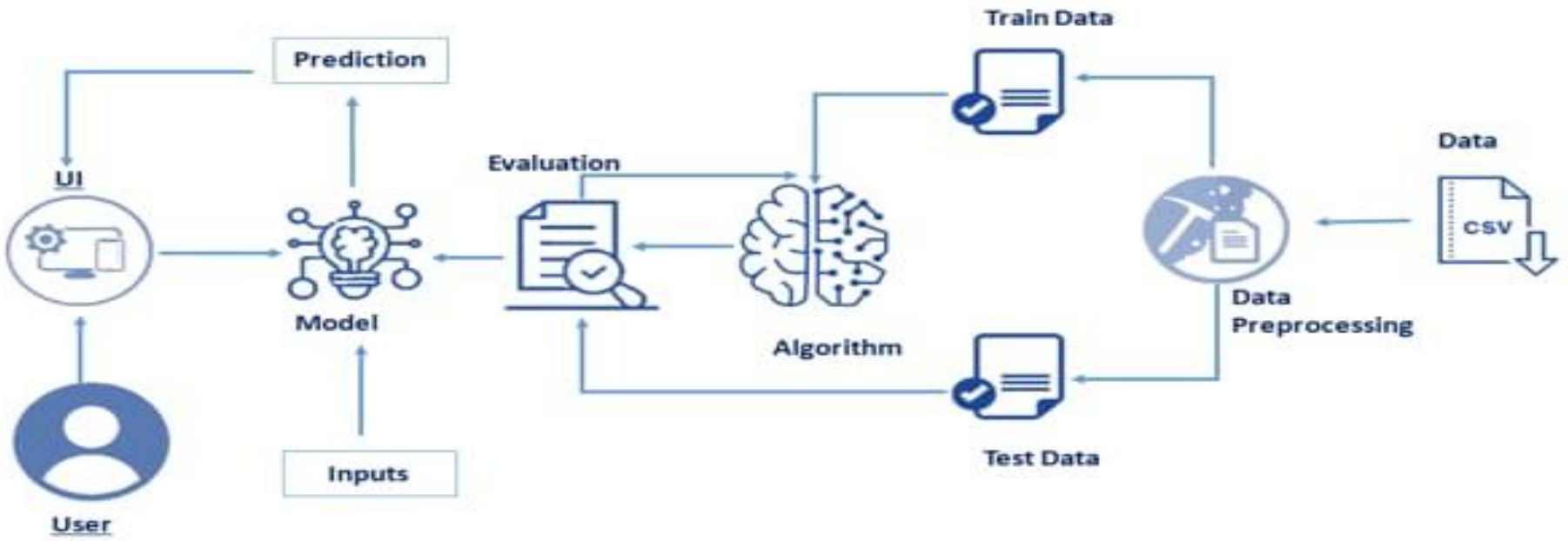

Table-1 : Components & Technologies:

S.No	Component	Description	Technology
1.	User Interface	The system must interface with the MongoDB database and the web search engine it will be launched on..	Python, HTML, Javascript, CSS etc.
2.	Application Logic-1	This project allows users to enter their academic data and get predictions of their chances of admissions in the university tier of their choosing.	Selenium etc.

3.	Application Logic-2	It also provides an analysis based on the data set used that shows how the different parameters affect chances of admissions.	Selenium web drive
4.	Application Logic-3	It will also be implemented for the system so that students can save their data and review and edit it as they progress with the most recent predictions being saved with their profile.	UI UX, BI, etc.
5.	Database	MongoDB is a cross-platform document-oriented database program. Classified as a NoSQL database program, MongoDB uses JSON-like documents with optional schemas.	MongoDB,NoSQL
6.	Cloud Database	The database could be updated to include all information for courses which award BTEC qualifications. The student database is implemented with the Ingres.	CloudSQL
7.	File Storage	Data storage makes it easy to back up files for safekeeping and quick recovery in the event of an unexpected computing crash or cyberattack.	IBM Block Storage or Other Storage Service or Local Filesystem
8.	External API-1	Apache JMeter may be used to test performance both on static and dynamic resources, Web dynamic applications. It can be used to simulate a	Apache JMeter
		heavy load on a server, group of servers, network or object to test its strength or to analyze overall performance under different load types.	
9.	External API-2	SoapUI is a tool for testing Web Services; these can be the SOAP Web Services as well RESTful Web Services or HTTP based services. SoapUI is an Open Source and completely free tool with a commercial companion -ReadyAPI- that has extra functionality for companies with mission critical Web Services.	SoapUI

10.	Machine Learning Model	to provide the most accurate prediction of how much of a chance of admissions does a student's current grades and other academic transcripts allow them in the tier of universities of their choice	Anaconda (Jupyter Notebook), etc.
11.	Infrastructure (Server / Cloud)	Application Deployment on Local System / Cloud Local Server Configuration: Client-Server application testing, the client sends requests to the server for specific information and the server sends the response back to the client with the requested information. Hence, this testing is also known as two-tier application testing Cloud Server Configuration : Cloud testing is the process of using the cloud computing resources of a third-party service provider to test software applications.	Local server:HTTP Cloud server:NoSQL

Table-2: Application Characteristics:

S.No	Characteristics	Description	Technology
1.	Open-Source Frameworks	OpenTest is a free and open source functional test automation framework for web applications, mobile apps and APIs.	Open APIs
S.No	**Characteristics**	**Description**	**Technology**
2.	Security Implementations	The system shall provide password protected access to the website to all users – students and admins both	User name – Password,Online code,OTP etc.
3.	Scalable Architecture	In terms of its ability to scale up or scale down the number of user requests or other such performance measure attributes.	LoadUIpro, Apache JMeter, etc.

4.	Availability	The system will be available to all users from any location as long as they have an Internet connection. The administrator can also access the website from any location as long as he has the correct login credentials and access to the Internet.	UI ,etc.
5.	Performance	• The system can support any number of users at a time. • The mean time to view a web page over a 56Kbps modem connection shall not exceed 5 seconds..	Apache JMeter

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