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

Date	5 th November , 2023	
Team ID	PNT2022TMID- 591758	
Project Name	Horology 2.0: Forecasting the Future of Smartwatch	
	Prices	
Maximum Marks	4 Marks	

Technical Architecture:

The Deliverable shall include the architectural diagram as below and the information as per the table 1 & table 2

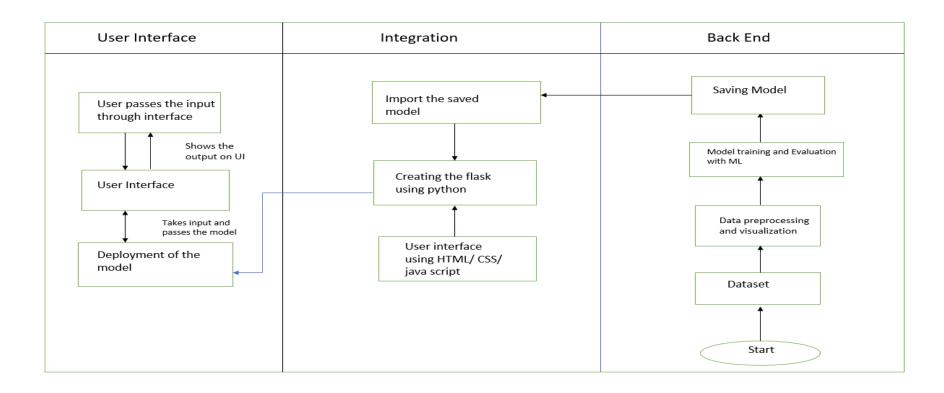


Table-1 : Components & Technologies:

S.No	Component	Description	Technology
1.	User Interface	How user interacts with application.	HTML, CSS, Java script
		eg: Web application	
2.	Application Logic-1	We connect the web interface with saved model.	Python
3.	Database	This database stores the collected and preprocessed	File Manager, MySQL, NoSQL, etc.
		smartwatch data, ensuring data integrity and accessibility	
		for the preprocessing and analysis stages.	
4.	File Storage	File storage requirements for storing our dataset	Local Filesystem, Google Drive
5.	Framework	It is used to create a web application	Python Flask,
6.	Machine Learning Model	Purpose of Machine Learning Model is to predict the price	Linear Regression, Decision Tree , Random
		of smartwatch with the given input features.	Forest, Gradient Boosting Regressor, Xtreme
			Gradient Boost Regressor.
7.	Infrastructure (Server / Cloud)	Application Deployment on Local System.	Local server

Table-2: Application Characteristics:

S.No	Characteristics	Description	Technology
1.	Open-Source Frameworks	Web Framework, scram Frame work	Python's Flask, jeera tool
2.	Security Implementations	Multifactor authentication	VS code, JS
3.	Scalable Architecture	Reduce the number of elements on your web pages (images, scripts, stylesheets) to minimize the number of HTTP requests. Fewer requests mean faster loading times.	Apache, MySQL

S.No	Characteristics	Description	Technology
4.	Availability	Offer an API that allows external parties to	Responsive Design
		access and integrate your pricing data into their	
		applications or systems.	
		Ensure your website is responsive and mobile-	
		friendly. Users accessing your website from	
		different devices should have a seamless	
		experience, regardless of the screen size.	
5.	Performance	Measure the accuracy of your price forecasts over time by	Numpy, Pandas, Matplotlib, Seaborn
		comparing your predictions to actual market prices.	