

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 table1 & table 2

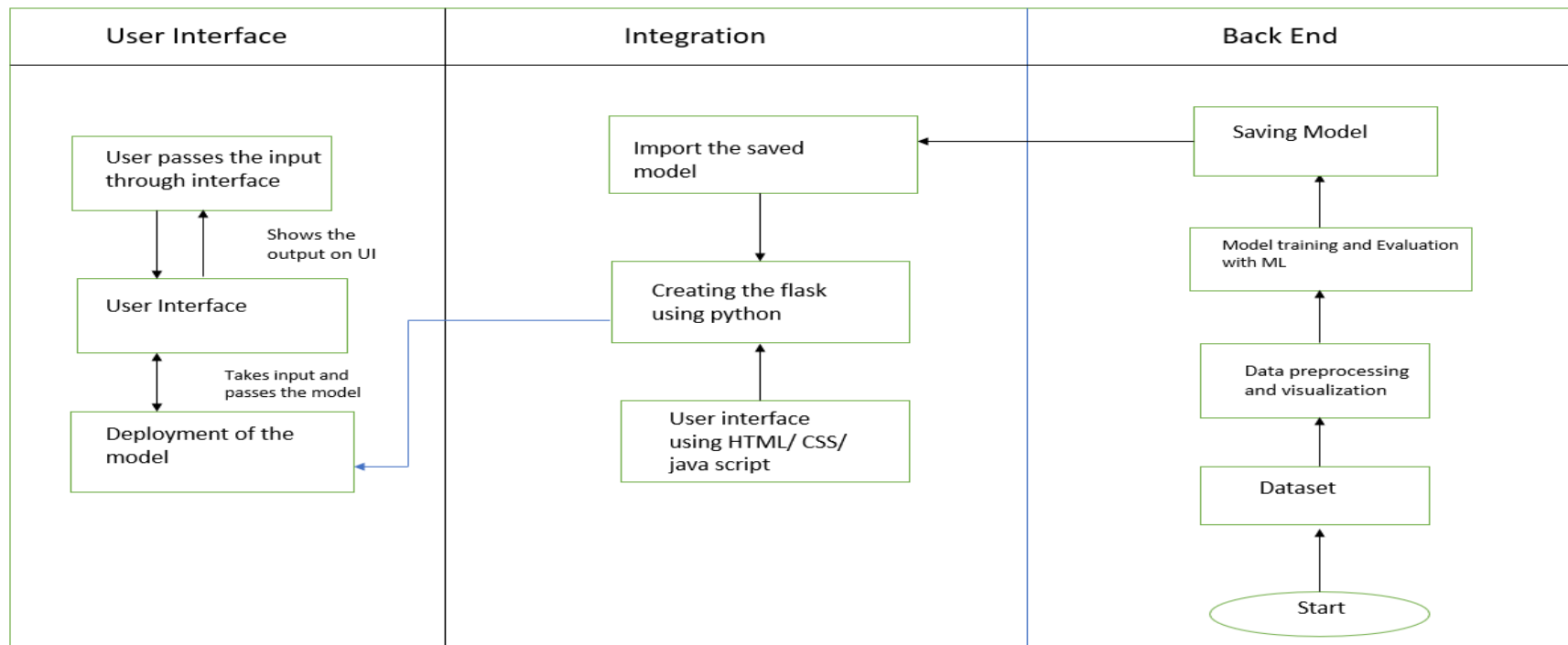


Table-1 : Components & Technologies:

S.No	Component	Description	Technology
1.	User Interface	How user interacts with application. eg: Web application	HTML, CSS, Java script
2.	Application Logic-1	We connect the web interface with saved model.	Python
3.	Database	This database stores the collected and preprocessed smartwatch data, ensuring data integrity and accessibility for the preprocessing and analysis stages.	File Manager, MySQL, NoSQL, etc.
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 of smartwatch with the given input features.	Linear Regression, Decision Tree , Random 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	<p>Offer an API that allows external parties to access and integrate your pricing data into their applications or systems.</p> <p>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.</p>	Responsive Design
5.	Performance	Measure the accuracy of your price forecasts over time by comparing your predictions to actual market prices.	Numpy, Pandas, Matplotlib, Seaborn