Project Detailed Document

Data Analytics Platform

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Objectives of the Project

- Help clients in improving their business processes
- Provide to grow the business
- Enhanced user experience
- Help client to make prediction based decisions

Functionalities

Data Analytics platform will be entirely a web application having :

1. **User login and verification**

   Admin will provide a login ID and password for login, and all users must have to use it for login after verification. Users will be able to use the software.

2. **Customized input feature**

   Users are able to provide customized input formats into the software. There are no restrictions on the input format, they only have to provide an excel file of their customers' past data.

   Ex: let's say the user belongs to any inventory business then he has to enter an excel file with customers' bill details

3. **Business strategy report generation**

   Analytica will provide detailed reports about how users' data is related to each other. Basically, the main aim of the software is to generate reports about how business can be run optimally by arranging related products together in inventory.

4. **Visualization of report**

   Analytica will provide a visual representation of the generated report. So that users can visualize results easily and efficiently.

5. **Business model performance matrix (through past data)**

   Analytica will store all the generated reports of the user so that the user can review past reports and compare how their past business strategy was performed and which strategy is working more effectively.

6. **Business subscription plan**

   Analytica software will be paid software. We will provide free trials for 1 month and then after that users have to purchase paid plans for further use.

7. **Online Payment feature for paid plans**

   Analytica software will accept online payment for the paid usage of the software. UPI payment plan will be there and also it may accept wallet payments.

8. **Dynamic categories**

   Analytica allows its users to select the business category. Then the platform will process the data accordingly.

9. **Customizable Homepage**

   Analytica software homepage will be customizable so that company(analytica) can use the homepage to run various clients/customers business model performance results.

10. Self data acquirement through web scraping for promotion

Analytica software will use some advanced web scraping algorithm to monitor users on various tech giant sites(amazon, flipkart) and then will use those data for software results pramoption.

Project Deliverables

1) Milestones
    - Week 1-2 (sprint 1) :
        - ➢ Basic user requirement collection
        - ➢ Design user interface
        - ➢ Feedback
    - Week 3-4 (sprint 2) :
        - ➢ Front-end Implementation of the web application
        - ➢ Login verification
        - ➢ Scaling storage capacity of the application
        - ➢ Debugging of the code
        - ➢ Feedback
    - Week 5-6 (sprint 3) :
        - ➢ Testing
        - ➢ Debugging
        - ➢ Feedback
        - ➢ Final release

Estimated total time

★ 150 hours

- Week 1-2 (sprint 1) : 50 hours
    - ➢ Basic user requirement collection : 10 hours
    - ➢ Design user interface : 30 hours
    - ➢ Feedback : 10 hours

- Week 3-4 (sprint 2) : 40 hours
    - ➢ Front-end Implementation of the web application : 12 hours
    - ➢ Login verification : 7 hours
    - ➢ Scaling storage capacity of the application : 11 hours
    - ➢ Debugging of the code : 6 hours
    - ➢ Feedback : 4 hours

- Week 5-6 (sprint 3) : 40 hours
    - ➢ Testing : 10 hours
    - ➢ Debugging : 15 hours
    - ➢ Feedback : 7 hours
    - ➢ Final release : 8 hours

- Extra time : 20 hours

H/W requirements

Server Side:

Monitor Resolution	: 1024 x 768
Processor	: Intel or AMD 2GHz
RAM	: 4GB
Disk Space	: 10 GB

Client Side:

Monitor Resolution	: 1024 x 768
Processor	: Intel or AMD 1GHz
RAM	: 512 MB
Disk Space	: 2 GB

S/W requirements

The computer: This software is going to be installed on Windows Operating System, equal to or above Windows 7. On that Windows platform, *.NET 3.5* will be installed and that will be the platform on which the particular software will be run. There will be an ADO.NET data transmission with the Microsoft SQL Server Management Studio Express 2010 R2 edition that will be installed on the same computer.

Analytica™ is written using HTML5 to allow all modern browsers to support it.
Analytica™ Web application has been *tested* during development using the following Browsers:

- Internet Explorer 11+
- Firefox 33.0+
- Chrome 38.0+

These Browsers will definitely *not work* with our software due to the lack of HTML5 standards:

- Internet Explorer 6, 7, 8
- Firefox 24 and lower
- Safari below Mac OS X and iOS 7
- Older Android browsers

Technology / Architecture

Front End Technologies: HTML, CSS, Bootstrap

Html is a scripting language that is used to structure web applications and CSS will be used for styling web applications. To make web applications responsive we will use the bootstrap framework.

Streamlit python framework:

Stremlit will be used to develop the software's core algorithm (association rule learning: Apriori, eclat). Stremlit is a python framework that uses code machine learning models very easily.

Back-end Technologies: Python + Django

Django is a high-level Python web framework that enables the rapid development of secure and maintainable websites. Built by experienced developers, Django takes care of much of the hassle of web development, so we can focus on writing our web app without needing to reinvent the wheel.

Database Technologies: Sqlite3

SQLite is a C-language library that implements a small, fast, self-contained, high-reliability, full-featured, SQL database engine. SQLite is the most used database engine in the world. SQLite is built into almost all devices (i.e. mobile phones and most computers) and comes bundled inside countless other applications that people use every day.

Tools/Frameworks: VScode, Postman, git, GitHub, Google-Colab

Visual Studio Code is a code editor redefined and optimized for building and debugging modern web and cloud applications.

Postman is an API platform for building and using APIs. Postman simplifies each step of the API lifecycle and streamlines collaboration so you can create better APIs—faster.

Git is a free and open-source distributed version control system designed to handle everything from small to very large projects with speed and efficiency.

Google-Colab is a data analysis and machine learning tool that allows you to combine executable Python code and rich text along with charts, images, HTML, LaTeX, and more into a single document stored in Google Drive.

Standard to be followed throughout the project

- Breaking it up into several phases.
- Constant collaboration with stakeholders
- Continuous improvement at every stage (feedback)
- Once the work begins, teams cycle through a process of planning, executing, and evaluating.
- Daily Scrum meeting
- Record Progress through tools like Taiga and making SRS via ReqView