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**Data Visualisation for a Flask Web Application**

**Proposal Date: 12-April-2021**

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**STATEMENT OF PURPOSE**

To help improve InnScience Labs Inc. business functionality using data collected from various sources and make better sense of the data collected.

**INTRODUCTION**

InnScience is a research and development (R&D) collaboration platform. We connect industries with researchers and other stakeholders to support prototyping, validation, and scaling.

**TEAM**

Aryaman Choudhary

A recent Bachelor of Computer Applications graduate from Amity University, Jaipur majoring in Computer Science with excellent knowledge of Application Development using C++. Passionate to learn and grow. A great team player having excellent communication Skills.

Harmilap Singh Dhaliwal

Data Scientist with 3.3 years of experience in a highly competitive and challenging field of Machine Learning using state-of-the-art tools to solve real-world problems and implement solutions. Hungry and eager to learn and grow both professionally and technically. Excellent practical knowledge of Big Data Analysis, Statistics, Machine Learning and Deep Learning using R and Python with good knowledge of reporting using Tableau. A team player, highly creative and adaptable with great communication skills.

Mukesh Kumar

An IT MBA professional from University of Pune & Bachelor’s in Computer Science from University of Mumbai, I have consulting experience of 4+ years. I have proven ability to analyze client requirements and suggest the best possible solutions for critical problems in the system. I have the expertise in implementation & maintenance of Enterprise & Mid-level applications across complex environments for clients across the globe.

**PROJECT DESCRIPTION**

* Integrate Key Performance indicators within an existing dashboard
* Calculate Success metrics and display them in a dashboard
* Act as an advisor for database improvement.

**PROJECT OBJECTIVES**

* Help InnScience develop a dashboard to monitor KPIs
* Improve Client Database Schema to help them with their market research.
* Calculate Success Metrics from the data.

**QUESTIONS AND QUERIES**

* What’s the nature of data we are to analyze?
* What business need are we fulfilling?
* How to show the information and KPIs in the Visualizations?
* Is the existing solution functions accordingly?
* Will we get the Success Metrics in the data?
* If not, how are we to calculate them?

**WORK BREAKDOWN STRUCTURE**

* Data Exploration
* Data Cleaning
* Retrieving Data from Database
* Building a better schema for Data Collection
* Integrate visualizations within the Web Application.
* Research how to calculate Success metrics
* Data Exploration
* Data Cleaning

**TOOLS AND TECHNOLOGIES**

**Python**

Python is a powerful integrated coding Language. Its open sourced, fast, and underscores code readability. It’s perfect for our project.

**Flask**

Flask is a microframework written in Python and it does not need any extra tool or library to run. A highly popular web framework which lets users to build web applications using Python.

**Power BI/Tableau**

It helps end-users to build complex and advanced visualizations by following simplistic patterns.

On the other hand, Tableau is a very powerful and fast Visualisation tool. We can use huge amounts of data without worrying about speed in Tableau. It’s a proprietary tool that hinders it use for this project. If we can get the student license, we will use it.

**JavaScript**

JavaScript is used in web applications to make dynamic webpages in contrast to static pages using HTML.

**SCOPE**

Adding KPI/Metrics to existing dashboard.

**OUT OF SCOPE**

Maintenance of database and existing KPI

**RAID LOG**

**Risks**

* Dashboard does not meet Clients Expectations
* Team members unavailability due to unforeseen circumstances.

**Assumptions**

* Working database
* Current and correct data is being fetched by application.
* We have the current schema of the database, properly created, well structured
* We will have complete access to work on the application.

**Issues**

* After going through the current solution, we can elaborate on issues if any.

**Dependencies**

* Getting data from the Client
* Getting in-depth requirements from the Client
* Availability of Client to explain any peculiarities within the use-case
* Success Metrics data.

**MILESTONE**

|  |  |
| --- | --- |
| TASK | DELIVER BY |
| Requirements Phase | April 16, 2021 |
| Project Charter Acceptance | April 19, 2021 |
| MRP Client Acceptance | April 23, 2021 |
| Design Phase | May 31, 2021 |
| Development Phase | June 31, 2021 |
| Testing Phase | July 15, 2021 |
| Release Phase | July 31, 2021 |

**CONCLUSION**

The outcome of the project will be a more optimized workflow for the client, better and quicker utilization of the resources. Our product will be outstanding and will meet and exceed client expectations, the final dashboard will help the client to understand their business better.

**APPENDIX**

**References**

**Team Introduction from LinkedIn (Personal Data)**

**Client Introduction from Client Website (https://innscience.ca)**