Propensity Life Tracker – Ariadne Project

Project Charter

15-Dec-2021

Team members:

Abhinandan Umakant Jawalekar

Jayarani Rajesh

Karthikeyan Suresh Kumar

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Project Overview

Project Name	ProPensity- Life tracker		
Project Charter Author	Jayarani Rajesh		
Creation Date	01-12-2021	**Last Revision Date**	15-12-2021
Project Requestor	Teresa Woods Snelgrove John Pickard		
Proposed Project Start	19-11-2021		
Proposed Project End	21-04-2021		

Stakeholders

Sponsor	Teresa Woods Snelgrove John Pickard

Client	Teresa Woods Snelgrove John Pickard
Project Team	Karthikeyan Suresh Kumar (Team Lead and Developer) Jayarani Rajesh (Business Analyst) Abhinandan Umakant Jawalekar (Data Analyst)

Project Details

Project Description	Propensity is a tool that helps a user capture a succession of thoughts or memories through dialogues/conversations with an intelligent agent (Like Alexa or Siri). Our agent is called "Ariadne". Through this tool, people can have conversations with Ariadne, which in turn analyses those conversations and converts them into meaningful reports which highlight the sentiment, subject, mood analysis of a person. The tool could have alternative uses: A mood monitor, mental health monitor, sentiment analysis, or bias analysis, etc. It could be offered as a wearable device, a smartphone app, etc.

Project Objective	Further development of the project, from the end of phase 1. Phase 1 of the development of the project largely focused on the initial research and the design of the Machine Learning (ML) models. The team has developed two ML models: one for the classification of the Taxonomy and the other model is for the Sentiment Classification. The Taxonomy classification model is based on the Naïve Bayes algorithm and this model has a prediction accuracy of 25%. The Sentiment classification model is based on the VADER (Valence Aware Dictionary for Sentiment Reasoning) model and it has a prediction accuracy rate of 70%. Phase 2 of the project involves improving the performance of the working ML models for the Taxonomy and Sentiment classification, developing new models for Subject and Tense classification, creating datasets for training and testing the models, connecting the models with the database to store data, creating visualizations for the output data.
Project Requirements	• Find possible ways to improve and enhance the performance of the current working models. • Create new datasets/monologues to train the model.

	• Design and develop a database to save the input data to be consumed and the output data generated by the machine learning model. • Research on machine learning models which would be the best fit for the Tense and Subject classification. • Implement the finalized machine learning algorithm for the Tense and Subject classification. • Develop interactive reports based on the data from the ML models.
Project Outcomes or Benefits	Upon the completion of Phase 2, the core part of the project would be almost over. The outcomes and benefits upon completion of Phase 2 would be the following: • Closely following with Phase 1, Phase 2 of the project also adds two more models for Subject and Tense classification. • More monologue datasets will be available. • Database will be implemented so that the team can view and analyze the past data. • As the data is stored, the visuals developed can be across a wide time frame. • The core part of the project will be completed, so that the next phase of the project which includes building UI, developing app/wearables tech can proceed. • A SharePoint site will be created containing all the necessary research documents, analysis documents, workflow documents, source code, sample datasets, etc. • Clients would have an idea of what has been completed so far and the next necessary steps to carry forward the project.

Project Scope	The scope of the project in Phase 2 is as follows • Performance enhancement of Taxonomy and Sentiment Analysis models. • Research and implementation of new models for Tense and Subject classification. • Database design and development for storing the input and output data. • Creating new datasets or finding new data libraries for training and testing the ML models. **Out of Scope:** The plans of the project include: • Developing a chatbot • Making an Android/IOS app
Project Deliverables	Upon the completion of Phase 2, the following components will be delivered to the clients. • Improved ML models for Taxonomy and Sentimental Analysis • Model for Tense classification • Model for Subject classification • Datasets used for training/testing the models • Database design architecture and scripts 1. Visualization of the analysis results 2. Project-related documents 3. Reference documents

Constraints/Risk	• The tasks completed in the previous phase must be conveyed to the new team accurately to ensure a smooth start to the next phase. • The Phase 1 team has hinted that the data for training/testing the application is very limited. • Time frame is the time targeted for the completion of a task.
	• Selecting a machine learning model, for the classification of Tense and Subject will be based on extensive research on what model would be a perfect fit for the classification topic. • The clients are the driving and the success factor for each project. They are the ones who take key decisions regarding the project. • Like the previous challenge if the client provides delayed responses which compromise the delivery date.
Assumptions	• The working models for Sentiment and Taxonomy classification developed in Phase 1 are having an accuracy of 70% and 25% respectively. • The input datasets shared for the models are up to date.

Key Dependencies	• Collect details of all the performed tasks done by the Phase 1 team and the necessary documents. Also, arrange a meeting with the Phase 1 team for knowledge transfer. • Gather the existing data used for training/testing of the model and know about data creation for the project. • Source code of the project

Communications

Stakeholder	**Message**	**Method**	**Frequency**
Sponsor	Client Meetings	Zoom meeting	As needed
	Risks and Issues	Email	As needed
	Project Status	Email	Weekly
Project Manager	Reports		
	Closing Presentation	Zoom meeting	
	Client Meeting	Zoom meeting	As needed
	Team Meetings	Zoom meeting	As needed
	Risks and Issues	Email	As needed

Team Members	Project Status Reports	Email (creator)	Weekly
	Closing Presentation	Zoom meeting	
	Client Meeting	Zoom meeting	Weekly
	Team Meetings	Zoom meeting	As needed
	Risks and Issues	Zoom meeting, email	As needed
	Project Status Reports	Email (contributor)	Weekly
	Closing Presentation	Zoom meeting	

Project Timeline

Project Timeline	**Activity**	**Complete By**
	Kick off meeting with clients	19/Nov/2021
	First proposal draft	22/Nov/2021

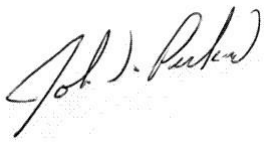
First transition meeting with Phase 1 team	25/Nov/2021
Requirements document preparation	29/Nov/2021
Second proposal draft	29/Nov/2021
Second transition meeting with Phase 1 team	02/Dec/2021
Final proposal	06/Dec/2021
Final project charter	13/Dec/2021
Initial Analysis and exploration of Phase 1 materials	20/Jan/2022
Preparation of the datasets for the models	27/Jan/2022
Research which database would be a good fit to store data and its implementation with the models.	10/Feb/2022
Exploring different ways and improving the performance of the Taxonomy and Sentiment models	03/Mar/2022

	Research which ML model would be best fit for the classification of Tense and Subject and the implementation of these models.	31/Mar/2022
	Collating the work done and preparing a report covering all the aspects of the project and making the visualizations.	14/Apr/2022
	Final meeting with the client and the delivery due of the project	21/Apr/2022

Approval signatures:

Teresa Snelgrove_____

Teresa Woods Snelgrove



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John Pickard

R.jayarani
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Jayarani Rajesh (Business Analyst)

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Approval date: December 17, 2021