Project Management Foundations

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LEARNING

Project Name:

Scope Statement

Project goal and objectives

CitiSense is a web based application that will supplement the current system of CitiSense with a means to automatically analyse and display sentiments in English, Tagalog, or multilingual survey answers using Natural Language Processing (NLP). Its key objective is to categorize the feedback as positive, neutral, and as negative as possible with accuracy not lower than 85 percent per six months. The automated process shall save 80 percent of the manual workload which will improve the turnaround time to feedback reports in order to make quick responsive decisions. CitiSense is also designed to integrate easily with current work flows and future scalability (e.g. the addition of new languages and new data sources).

Project Boundaries

Within scope: In this project, the objective is the development of CitiSense, a web application that will make an automatic analysis offeeling and see figures presented in questionnaire answers in English or Tagalog or a combination of both languages. A properly tuned Natural Language Processing (NLP) model will be used in the system. subjecting feedbacks to three categories; that is, positive, neutral and negative. Also, it will include a dynamically updated dashboard complete with sentiment trends and keywords, aiding the IRAD division of DOST to be more enlightened about what people feel. It will be an app. To be integrated with the already existing feedback collection form used by DOST-STII and will be able to receive text-based feedback. The main audiences of this system are data analysts, data researchers and government officials following up on the reactions of the people.

Out of scope: Audio and visual responses will not be supported and the system will only support text responses. Although the model of NLP is made to deal with both Tagalog and English inputs, when dealing with regional languages, it is better to use regional languages. very informal language or dialects may affect precision of sentiment classification. The performance of this model is influenced by the training data used as it has to depend on its quality and diversity. Furthermore, the visualization segment will be reduced only to the sentiment patterns and keywords; more sophisticated Predictive analytics or topic modeling also will not be added

in this first release. Moreover, the They will not incorporate real-time data of any external sources into the current feedback system. form

Project Deliverables

- Text Only NLP Feedback System A Web application which feeds back and parses feedback containing either English or Tagalog input or both in any permutation with the 3 possible sentiment conditions (Positive, Negative or Neutral).
- Sentiment Visualization Dashboard A simplified dashboard of:
- Trends in sentiment or by category
- There were highlighted keywords indicating themes of feedback
- Language Model (NLP engine) The Language Model is an NLP model trained to work with English and Tagalog input (to some extent, the input of informal or dialectal words).
- Feedback Processing Pipeline - Backend infrastructure that ingests the feedback data, and generates structured sentiment classes.
- Static Dataset Integration - A system which uses preloaded/static feedback data (not live on-line or other live systems).
- Documentation-User Guides, model restrictions, and documentation of use and feedback management in the system.

Success Criteria

The project and its deliverables will be deemed successfully completed when the NLP model categorizes the feedback on English and Tagalog correctly, and the sentiment visualization dashboard will show noticeable trends and meaningful terms. It should not be underdeveloped in functionality, free of bugs and be able to process static feedback information and meet the desired level of performance without depending on the external sources in real-time.

Passing through User Acceptance Testing (UAT), stakeholder approval, and provision of complete documentation are also determinants to success. After the system is deployed, tested and officially delivered to IRAD with relevant training and sign-off the project may be considered complete

Project Assumptions

- The security and privacy is already operational in the DOSTSTII to manage user information.
- DOSTSTII already has security and privacy policies in place so that it can deal with the data of the users.
- The training data on which the NLP model is trained has quality and quantity needed to give decent accuracy on the sentiment classification.

Project Constraints

Time Constriction has to be done within a strict timeframe, development, testing, and releasing, which reduces the amount of features and possible fixes that can be incorporated into it.

Data Constraint – The effectiveness of the model is bound to available training data; whose quality and variety can impact the overall system accuracy.

Technical Limitations- There will be no connection to live external sources or APIs and the system will handle only static (uploaded) data.