

Academic-Related Services of Laguna State Polytechnic University With Sentiment Analysis and Data Analytics Using Multinomial Naïve Bayes Algorithm

Reynalen C. Justo

Laguna State Polytechnic University – Santa Cruz Main Campus
Brgy. Bubukal Santa Cruz, Laguna

Abstract

Sentiment is a term that refers to a topic that is both subjective and objective, as well as a factual or non-factual topic that is neither positive nor negative. Sentiment analysis is a type of investigation based on spreading rumors or gossip. This study intended to investigate the college students' feedback in the three academic-related services to sentiment analysis utilizing the multinomial Naïve Bayes algorithm. The respondents of this study included College Students enrolled in the College of Computer Studies at Laguna State Polytechnic University - Santa Cruz Campus. Data was gathered using Google Forms for historical data and software testing with ISO 25010 and data analytics mobile application software to analyze and evaluate based on the students' sentiments. The researcher used descriptive and developmental research designs. The agile model was used in the development methodology.

The researcher employed diverse methods for collecting data to identify the necessary elements with the developed mobile application with Flutter Framework and Dart Programming. Based on the results and findings of the three academic-related services,

namely Admission and Enrollment (4.52), Classroom Management (4.289), and Research (4.356), all areas have reflected positive sentiments but analysis showed that its good performance should be continuous. Lastly, it is recommended to develop an additional module that automatically generates the topic model based on the evaluation procedure such as perplexity and coherence.

Keywords: Sentiment analysis, academic-related services, Multinomial Naïve Bayes Algorithm, and Agile Development Methodology