

Evaluasi *Usability* Aplikasi *Byond by BSI* Berbasis *Post-Study System Usability Questionnaire* (PSSUQ) dengan Analisis Komparatif *Naïve Bayes* dan *K-Nearest Neighbor*

ABSTRAK

Perkembangan teknologi digital mendorong transformasi layanan perbankan melalui aplikasi mobile banking. Salah satu aplikasi yang dikembangkan adalah Byond by BSI yang menyediakan berbagai layanan transaksi, ibadah, dan berbagi dalam satu platform digital. Namun, hasil prasurvei menunjukkan masih terdapat pengguna yang mengalami kesulitan dalam menyelesaikan transaksi, memahami informasi, serta menggunakan menu dan navigasi aplikasi. Oleh karena itu, penelitian ini bertujuan untuk mengevaluasi tingkat *usability* aplikasi Byond by BSI menggunakan metode Post-Study System Usability Questionnaire (PSSUQ) serta membandingkan performa algoritma Naïve Bayes dan K-Nearest Neighbor (KNN) dalam mengklasifikasikan tingkat kepuasan pengguna. PSSUQ digunakan untuk mengukur *usability* berdasarkan dimensi *System Usefulness*, *Information Quality*, dan *Interface Quality*. Data hasil kuesioner kemudian dianalisis menggunakan algoritma Naïve Bayes dan KNN dengan metrik evaluasi *accuracy*, *precision*, *recall*, dan *F1-Score*. Hasil penelitian menunjukkan bahwa aplikasi Byond by BSI memiliki tingkat *usability* yang baik dengan nilai rata-rata *Overall* sebesar 2,07, *System Usefulness* sebesar 2,02, *Information Quality* sebesar 2,16, dan *Interface Quality* sebesar 2,03. Hasil klasifikasi menunjukkan bahwa Naïve Bayes memberikan performa terbaik dengan nilai *accuracy* 96,2%, *precision* 95,4%, *recall* 96,2%, dan *F1-Score* 95,8%, sedangkan KNN terbaik pada K=7 memperoleh *accuracy* 94,3%, *precision* 93,5%, *recall* 94,3%, dan *F1-Score* 93,8%. Dengan demikian, Naïve Bayes direkomendasikan sebagai model klasifikasi yang paling optimal untuk mengklasifikasikan tingkat kepuasan pengguna aplikasi Byond by BSI.

Kata kunci: *Usability, PSSUQ, Naïve Bayes, K-Nearest Neighbor.*

Usability Evaluation of the Byond by BSI Application Based on the Post-Study System Usability Questionnaire (PSSUQ) with a Comparative Analysis of Naïve Bayes and K-Nearest Neighbor

ABSTRACT

The rapid development of digital technology has driven the transformation of banking services through mobile banking applications. One of these applications is Byond by BSI, which provides transaction, worship, and donation services within a single digital platform. However, a preliminary survey indicated that users still experienced difficulties in completing transactions, understanding information, and navigating the application. Therefore, this study aims to evaluate the usability of the Byond by BSI application using the Post-Study System Usability Questionnaire (PSSUQ) and to compare the performance of the Naïve Bayes and K-Nearest Neighbor (KNN) algorithms in classifying user satisfaction levels. The PSSUQ was employed to measure usability based on three dimensions: System Usefulness, Information Quality, and Interface Quality. The questionnaire data were then analyzed using Naïve Bayes and KNN algorithms, with performance evaluated through accuracy, precision, recall, and F1-Score metrics. The results showed that the Byond by BSI application has a good level of usability, with an Overall score of 2.07, System Usefulness score of 2.02, Information Quality score of 2.16, and Interface Quality score of 2.03. The classification results revealed that Naïve Bayes achieved the best performance, with an accuracy of 96.2%, precision of 95.4%, recall of 96.2%, and F1-Score of 95.8%. Meanwhile, the best KNN performance was obtained at K=7, with an accuracy of 94.3%, precision of 93.5%, recall of 94.3%, and F1-Score of 93.8%. Therefore, Naïve Bayes is recommended as the most optimal classification model for classifying user satisfaction levels based on the usability data of the Byond by BSI application.

Keyword: Usability, PSSUQ, Naïve Bayes, K-Nearest Neighbor