

ABSTRAK

Proses pra-konseling mahasiswa merupakan tahap penting dalam mendukung layanan konseling di perguruan tinggi. Namun, keterbatasan waktu layanan dan hambatan psikologis sering menyebabkan mahasiswa enggan menyampaikan kondisi emosionalnya secara langsung. Penelitian ini bertujuan membangun aplikasi chatbot pra-konseling berbasis Natural Language Processing (NLP) sebagai sarana skrining awal non-klinis bagi mahasiswa Universitas Pembangunan Nasional “Veteran” Jakarta. Sistem dikembangkan menggunakan model Sentence-BERT (SBERT) paraphrase-multilingual-MiniLM-L12-v2 untuk menghasilkan representasi semantik teks, Multi-Layer Perceptron (MLP) untuk klasifikasi emosi, dan Logistic Regression untuk pengenalan intent. Selain itu, sistem menerapkan mekanisme deteksi risiko dan generasi respons berbasis aturan (rule-based) untuk menghasilkan respons yang empatik dan kontekstual. Hasil implementasi menunjukkan bahwa sistem mampu mengidentifikasi emosi dan intent pengguna, melakukan skrining awal kondisi emosional, serta menghasilkan respons pra-konseling yang sesuai dengan konteks percakapan. Sistem ini diharapkan dapat membantu meningkatkan efisiensi asesmen awal dan memperluas akses layanan pra-konseling bagi mahasiswa.

Kata Kunci: Chatbot, Deteksi Emosi, Intent Recognition, Natural Language Processing, Pra-Konseling.

ABSTRACT

Student pre-counseling is an important stage in supporting counseling services at universities. However, limited service availability and psychological barriers often make students reluctant to express their emotional conditions directly. This study aims to develop a Natural Language Processing (NLP)-based pre-counseling chatbot application as a non-clinical initial screening tool for students at Universitas Pembangunan Nasional “Veteran” Jakarta. The system utilizes the Sentence-BERT (SBERT) paraphrase-multilingual-MiniLM-L12-v2 model to generate semantic text representations, a Multi-Layer Perceptron (MLP) for emotion classification, and Logistic Regression for intent recognition. In addition, the system implements rule-based risk detection and response generation mechanisms to provide empathetic and contextual responses. The implementation results indicate that the system is capable of identifying user emotions and intents, conducting initial emotional condition screening, and generating pre-counseling responses according to the conversation context. The system is expected to improve the efficiency of initial assessments and expand access to pre-counseling services for students.

Keywords : Chatbot, Emotion Detection, Intent Recognition, Natural Language Processing, Pre-Counseling.

