

Abstrak

Program magang MSIB Kampus Merdeka memberikan pengalaman kerja nyata kepada mahasiswa melalui kolaborasi dengan perusahaan, seperti PT. XYZ, guna meningkatkan kompetensi dan kesiapan mereka menghadapi dunia profesional. Namun, tingginya jumlah pelamar magang menimbulkan tantangan dalam proses seleksi, sehingga diperlukan sistem rekrutmen yang efisien, objektif, dan mampu menyaring kandidat terbaik secara adil. Penelitian ini bertujuan untuk mengimplementasikan model klasifikasi dalam proses administrasi rekrutmen mahasiswa magang di program Kampus Merdeka di PT. XYZ. Fokus utama penelitian ini adalah untuk mengeksplorasi teknik yang digunakan dalam implementasi model klasifikasi dan mengevaluasi hasil pengujian yang dilakukan. Metodologi yang digunakan meliputi penggabungan data dari berbagai sumber, pemrosesan data, dan penerapan algoritma klasifikasi menggunakan Categorical Naive Bayes. Hasil penelitian menunjukkan bahwa model Naive Bayes tanpa SMOTE menghasilkan akurasi 89% namun dengan F1-Score untuk kelas diterima hanya 33%. Fitur SMOTE mencegah terjadinya *data imbalance* dikelas minoritas sehingga model yang dibuat dapat menghasilkan akurasi 80% dan dengan F1-Score untuk kelas diterima 82%. Penelitian ini diharapkan dapat memberikan kontribusi signifikan dalam meningkatkan efisiensi dan efektivitas proses rekrutmen di PT. XYZ.

Kata Kunci: *Predictive Analytics*, Rekrutmen, *Categorical Naive Bayes*, SMOTE, Python

Abstract

The MSIB Kampus Merdeka internship program provides students with real work experience through collaboration with companies, such as PT. XYZ, in order to enhance their competencies and readiness for the professional world. However, the high number of internship applicants presents challenges in the selection process, necessitating a recruitment system that is efficient, objective, and capable of fairly selecting the best candidates. This study aims to implement a classification model in the administrative recruitment process for internship students in the Kampus Merdeka program at PT. XYZ. The main focus of this research is to explore the techniques used in the implementation of the classification model and evaluate the results of the testing conducted. The methodology includes data integration from various sources, data processing, and the application of a classification algorithm using Categorical Naive Bayes. The results show that the Naive Bayes model without SMOTE achieved an accuracy of 89%, but the F1-score for the accepted class was only 33%. The SMOTE feature prevents data imbalance in the minority class, enabling the model to achieve 80% accuracy and an F1-score of 82% for the accepted class. This research is expected to contribute significantly to improving the efficiency and effectiveness of the recruitment process at PT. XYZ.

Keywords: Predictive Analytics, Recruitment, Categorical Naive Bayes, SMOTE, Python