PENERAPAN ALGORITMA NAÏVE BAYES DALAM MEMPREDIKSI KEMAMPUAN LULUSAN SMK UNTUK BERSAING MENDAPATKAN PEKERJAAN

(Studi Kasus: SMK Negeri 1 Nusa Penida)

Oleh

Ni Kadek Jempol, NIM 2013101001

Jurusan Matematika

ABSTRAK

Lulusan sekolah menengah kejuruan (SMK) dituntut untuk siap terjun ke dunia kerja. Untuk kasus di SMK Negeri 1 Nusa Penida, data menunjukkan bahwa banyak lulusan yang berhasil memasuki dunia kerja, namun ada pula yang belum mampu bersaing mendapatkan pekerjaan. Diperlukan algoritma untuk memprediksi kemampuan lulusan SMK untuk bersaing di dunia kerja. Penelitian ini mencoba menerapkan algoritma *Naïve Bayes* sebagai metode prediksi kemampuan lulusan bersaing di dunia kerja. Penelitian ini menggunakan data sekunder yang diperoleh dari data lulusan SMK Negeri 1 Nusa Penida tahun 2022. Variabel yang dipertimbangkan ada sembilan, yaitu jurusan, nilai ujian sekolah, nilai rata-rata rapor, nilai uji kompetensi, nilai PKL, disiplin, tanggung jawab, sikap dan kemampuan komunikasi. Klasifikasi keputusan ada dua, yaitu mampu bersaing mendapatkan pekerjaan dan belum mampu bersaing mendapatkan pekerjaan. Hasil penelitian menunjukkan bahwa algoritma *Naïve Bayes* dapat digunakan untuk memprediksi kemampuan lulusan SMK bersaing di dunia kerja dengan akurasi 95,6%, presisi 91% dan recall 100%. Algoritma tersebut sudah diimplementasikan menjadi aplikasi menggunakan bahasa pemrograman *python*.

Kata kunci: Lulusan, bersaing, SMK Negeri 1 Nusa Penida, algoritma Naïve Bayes, aplikasi.

APPLICATION OF THE NAÏVE BAYES ALGORITHM IN PREDICTING THE ABILITY OF VOCATIONAL SCHOOL GRADUATES TO COMPETE FOR JOBS
(Case Study: State Vocational School 1 Nusa Penida)

By

Ni Kadek Jempol, NIM 2013101001

Mathematics Departement

ABSTRACT

Vocational high school (SMK) graduates are required to be ready to enter the world of work. In the case of SMK Negeri 1 Nusa Penida, data shows that many graduates have successfully entered the world of work, but there are also those who have not been able to compete for jobs. An algorithm is needed to predict the ability of vocational school graduates to compete in the world of work. This research tries to apply the Naïve Bayes algorithm as a method for predicting graduates' ability to compete in the world of work. This research uses secondary data obtained from data from graduates of SMK Negeri 1 Nusa Penida in 2022. There are nine variables considered, namely major, school exam scores, average report card scores, competency test scores, PKL scores, discipline, responsibility, attitude. and communication skills. There are two classifications of decisions, namely being able to compete for a job and not being able to compete for a job. The research results show that the Naïve Bayes algorithm can be used to predict the ability of vocational school graduates to compete in the world of work with 95.6% accuracy, 91% precision and 100% recall. This algorithm has been implemented into an application using the Python programming language.

Keywords: Graduates, competitive, SMK Negeri 1 Nusa Penida, Naïve Bayes algorithm, application.