Web-Based Decision Support System for Recruitment of PUBG Mobile Division E-Sports Team Using Support Vector Machine Method

Supervised by Ery Setiyawan Jullev Atmadji, S.Kom, M.Cs.

Kristopher Yohanes Immanuel Tambunan
Study program of Informatic Engineering
Majoring of Information Technology

ABTRACT

The rapid growth of the e-sports industry, particularly in PUBG Mobile, demands an effective player selection process to build a competitive team. This research aims to develop a web-based Decision Support System (DSS) to assist the recruitment process for the PUBG Mobile division team in Jember, utilizing the Support Vector Machine (SVM) method. The data used consists of four main criteria: KD (Kill/Death Ratio), Win Ratio, Accuracy, and Headshot Rate, collected through observation and interviews with ESI Jember. The research stages include data normalization using StandardScaler, pseudo-labeling with K-Means Clustering, and training and evaluation of the SVM model with an RBF kernel. Model evaluation was conducted using cross-validation with 70:30 and 80:20 data split scenarios, as well as 5-fold and 10-fold cross-validation. The evaluation results show that the best model was achieved with a complexity parameter of 2 and gamma of 0.2, yielding an average cross-validation accuracy of 97,59% and a test data accuracy of 98.32%. This web-based system enables ESI Jember administrators to manage player data, perform eligibility predictions, and assist in making more objective and accurate recruitment decisions.

Keywords: *Decision Support System, Support Vector Machine, PUBG Mobile, E-Sports, K-Means Clustering.*