

UNIVERSITI TEKNOLOGI MARA

**PREDICTION OF FOOTBALL CLUB WINNING RATE
USING BAYESIAN MODEL ALGORITHM**

ADAM BIN KHAIRUL ANUAR

**COLLEGE OF COMPUTING, INFORMATION AND MEDIA
BACHELOR OF COMPUTER AND SCIENCE (HONS.) (CS230)
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ABSTRACT

This research explores football analytics in light of technological advancements. Football, a globally popular and financially significant sport, attracts substantial investments, especially in successful clubs. The study delves into Bayesian modeling for predicting football club winning rates, emphasizing the potential of integrating technology like multi-camera tracking and video assistance refereeing. Despite technological progress, a gap exists in fully incorporating big data into football analytics, which this research aims to address through Bayesian models. Objectives involve studying, developing, and evaluating the accuracy of a Bayesian model for predicting winning rates. The methodology includes preliminary studies, model prototyping, and evaluation using data from sources like Kaggle. Key results showcase a robust confusion matrix with metrics like True Positives, True Negatives, False Positives, False Negatives, Precision, Recall, and Accuracy. The evaluation involves K-fold cross-validation, indicating superior performance compared to Single Train-Test Split. Recommendations include continuous model training, detailed features, collaboration with experts, and exploring alternative algorithms. In essence, this research contributes to football analytics, offering a reliable Bayesian model for match outcome prediction.