MAS03

PREDICTING VOTER PARTICIPATION IN AMERICAN PRESIDENTIAL ELECTIONS: A MULTI-MODEL PREDICTIVE ANALYSIS FROM 1972-2020

Ajaya Swain, Sharmistha Swain
St. Mary's University, San Antonio, Texas, USA

Abstract

Understanding voter participation is essential for political campaigns aiming to optimize strategies and allocate resources effectively. This study analyzes data from the American National Election Studies (ANES) covering 1972-2020 to identify key predictors of voting behavior. Employing logistic regression, decision trees, Support Vector Machines (SVM), and Artificial Neural Networks (ANN), the study finds that education, political affiliation, and ideological identification are significant predictors of voting, while specific policy attitudes are less influential. Logistic regression with imputed missing values performed best among the models. These findings offer valuable insights for political campaigns in optimizing voter outreach strategies.

Conference Track

Modeling and Simulation