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The prediction of the South African elections' outcome

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Abstract

The CSIR used its highly acclaimed elections prediction model to predict the outcome of the 2024 elections held on the 29 May 2024. This model was initially developed for South African elections and was first introduced during the 1999 general elections. Since its inception, the model has successfully forecasted the outcomes for local government elections with just 5% to 10% of VDs declared. It has garnered international recognition for its accuracy across various electoral systems. The tool also plays an integral role in authenticating the final results of the elections.

The model relies on two main principles of understanding voting behaviour: past voting patterns and influences from political, socioeconomic and demographic factors. Using this data, CSIR statisticians and data scientists group voters into clusters, anticipating that changes in voting behaviour will be similar within each group. When the early results arrive, the model uses this data to estimate new voting behaviour for similar groups of districts. These estimates are then extended to the remaining districts yet to be counted. By combining known results with predicted ones, the model then generates a final prediction. The model correctly predicted that the ANC would lose their majority, even though they would remain the leading party in the country and predicted that the MK party would overtake the EFF to be the 3rd largest party in the country. The predictions for the MK party were surprisingly good, considering they were a new party, and the model predicted their support to be close to 14% of the votes at a time in the counting process when the scoreboard was only showing their support to be around 8%. Overall, predictions for the top 6 parties performed well from around 10% of the VDs declared, with the ANC prediction taking longer to stabilize than the other parties but remaining within the 2% error margin once predictions were released.

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