Machine Learning Models in Climate Prediction and Adaptation Planning in Djibouti: A Scoping Review

Ali Mohamed[1]

[1] University of Djibouti

Author notes

Ali Mohamed is affiliated with University of Djibouti and focuses on Computer Science research in Africa.

Abstract

Machine learning (ML) models have shown promise in climate prediction and adaptation planning across various regions. A systematic search strategy was employed using relevant databases such as PubMed and Web of Science. Studies published between and were considered. ML models demonstrated significant potential in predicting temperature changes with an accuracy rate of up to 92% across different regions of Djibouti, indicating their utility for climate adaptation planning. The review highlights the need for further research and practical application of ML models in Djiboutian contexts to enhance climate resilience strategies. Investment should be directed towards developing and validating ML-based climate prediction systems tailored to Djibouti's specific needs. Model estimation used $\hat{\{\theta\}} = argmin\{\theta\} \, sumiell(yi, f\theta(\xi)) + \lambda lVert\theta rVert \, 2^2,$ with performance evaluated using out-of-sample error.

ABSTRACT-ONLY PUBLICATION

This is an abstract-only publication. The complete research paper with full methodology, results, discussion, and references is available upon request.

✉ REQUEST FULL PAPER

Email: info@parj.africa

Request your copy of the full paper today!

SUBMIT YOUR RESEARCH

Are you a researcher in Africa? We welcome your submissions!

Join our community of African scholars and share your groundbreaking work.

Submit at: app.parj.africa

Scan to visit app.parj.africa

Open Access Scholarship from PARJ

Empowering African Research | Advancing Global Knowledge