

AI-Based Dengue Early Warning System — Singapore NEA's Machine-Learning Outbreak Forecasting

AI in the Public Sector · Good practice · Singapore

Quality score: 87/100

Evidence strength: Quasi-experimental

Summary

Singapore's National Environment Agency runs a peer-reviewed machine-learning system that forecasts dengue cases up to three months ahead. In the 2013 outbreak it predicted a peak of 863 cases versus an observed 842, letting campaigns launch two months early.

Key dimensions

Dimension	Score
Evidence of impact / measured public value	3/3
Transparency, fairness & accountability	3/3
Transferability / demonstrated replication	2/3
Scalability beyond pilot	3/3
Governance, capability & sustainability	2/3

Evaluated by C-NAPSE

Data sources

[C-NAPSE web research](#) — accessed 2026-07-13

[National Environment Agency \(NEA\) — Environmental Health Institute, with National University of Singapore and Nanyang Technological University](#) — accessed 2026-07-13

[Shi et al., Environmental Health Perspectives — Three-Month Real-Time Dengue Forecast Models](#) — accessed 2026-07-13

[GovInsider Asia — How machine learning helps Singapore swat dengue](#) — accessed 2026-07-13

[NIH/PMC — Singapore Success: New Model Helps Forecast Dengue Outbreaks](#) — accessed 2026-07-13

Cite this — Evidoria. *AI-Based Dengue Early Warning System — Singapore NEA's Machine-Learning Outbreak Forecasting*. Persistent ID: 9af44d22-d55f-4c78-8ca6-d06a38bac13d.