



# Dengue Risk Prediction using Machine Learning.

ALIGNED WITH UN SDG 3: GOOD HEALTH AND WELL-BEING

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# 1. Dengue Risk Prediction using Machine Learning

Dengue is the name of a viral disease transmitted to humans by the bite of infected Aedes mosquitoes



## 2. The Problem

- Dengue fever is a major public health issue in tropical areas.
- Outbreaks strain healthcare systems and increase mortality.
- Current predictions rely on reactive measures instead of proactive ones.

### **3. Our Solution**

- Use machine learning (Random Forest model) to predict dengue risk.
- Input data: weather factors (temperature, rainfall, humidity) + city/week.
- Output: estimated number of dengue cases → helps early planning.

## 4. Results & Impact

- Model tested with sample dataset → able to give predictions.
- Impact:
  1. Helps governments allocate resources (medicines, staff, mosquito nets).
  2. Reduces risk of outbreaks spreading.
  3. Promotes preventive healthcare (fits SDG 3).
- Ethical Note: Predictions are advisory only, not medical diagnosis.

## Next Steps & Conclusion

- Improve accuracy with real, larger datasets.
- Deploy model as a web app for public health officials.
- Expand to other diseases affected by climate (malaria, cholera).

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AI can be a powerful tool in saving lives through early intervention.