

Rising Waters: A Machine Learning Approach to Flood Prediction

9.2 DISADVANTAGE:

Dependence on Data Quality

The system's accuracy depends on the quality and availability of historical and real-time data. Incomplete or incorrect data can reduce prediction accuracy.

Limited Prediction Accuracy

Machine learning models cannot guarantee 100% accurate predictions. Unexpected natural events may affect results.

Requires Continuous Data Updates

To maintain accuracy, the model must be retrained regularly with updated environmental data.

Infrastructure Dependency

The system requires internet connectivity, server availability, and proper deployment infrastructure for smooth operation.

High Initial Development Effort

Developing, training, and testing machine learning models requires technical expertise and time.

Cannot Replace Human Expertise Completely

The system supports decision-making but cannot fully replace meteorologists and disaster management experts.

Risk of False Alerts

Incorrect predictions may cause:

- False positives (unnecessary panic)
- False negatives (missed warnings)