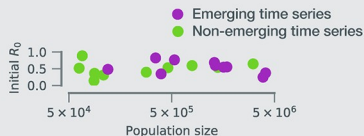
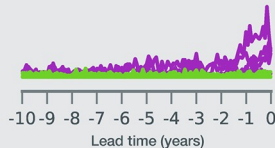


# Learning Algorithm

## a) Latin Hypercube Sampling

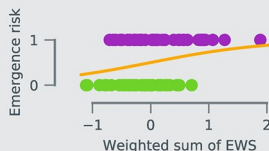


## b) Stochastic Simulation of Transmission Model

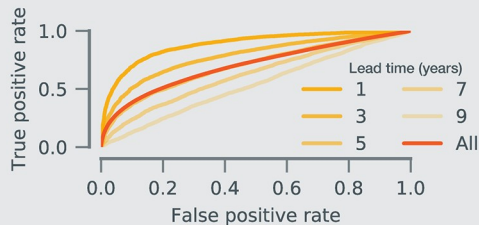


## c) Calculate EWS for Each Time Series

## d) Optimise EWS Weights Using Logistic Regression

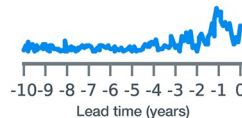


## e) Select Detection Threshold Using ROC Curve

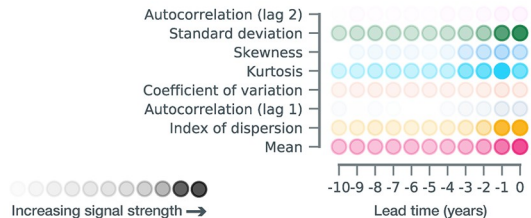


# Early-Warning System

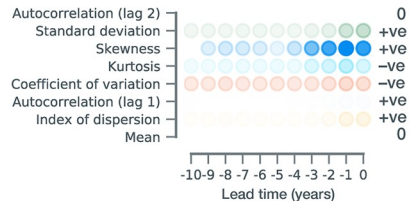
## f) Time Series Data



## g) Calculate Early-Warning Signals (EWS)



## h) Weight Each EWS



## i) Calculate Weighted Sum and Logistic Transform

