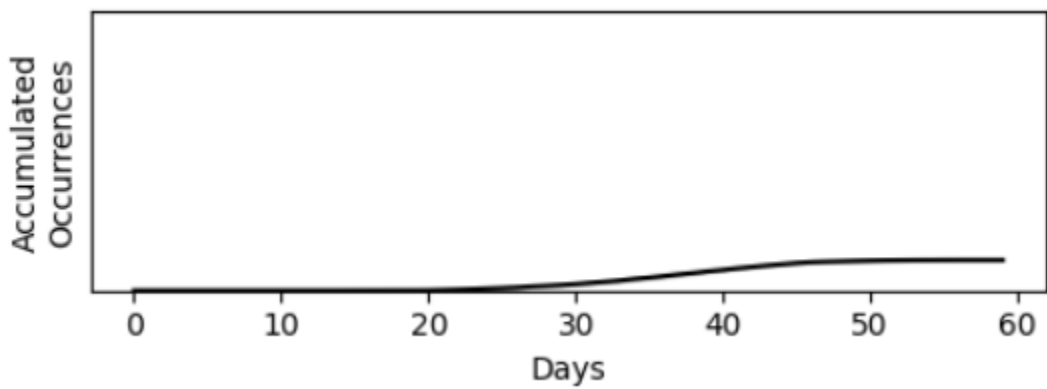
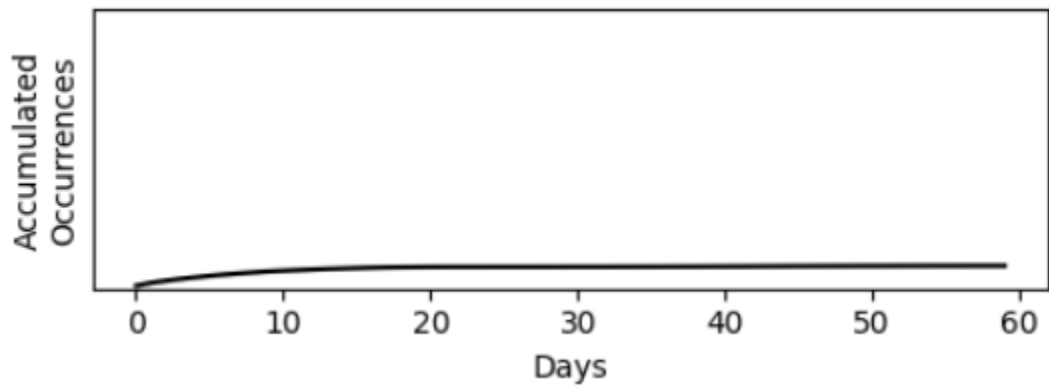
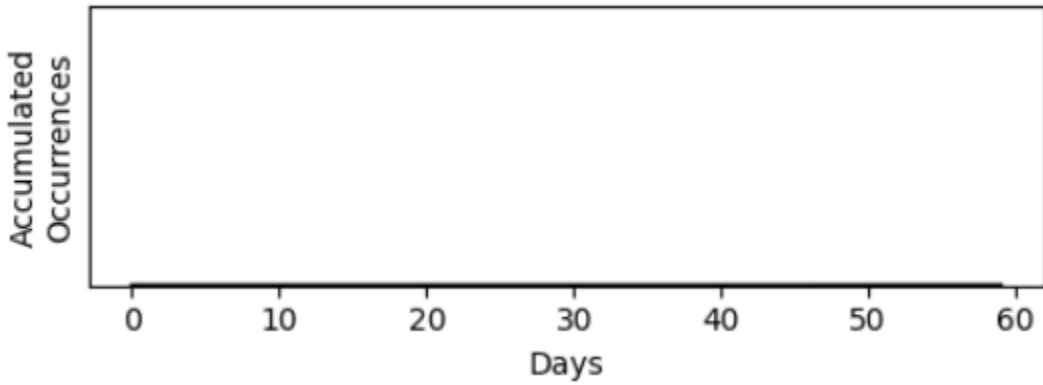
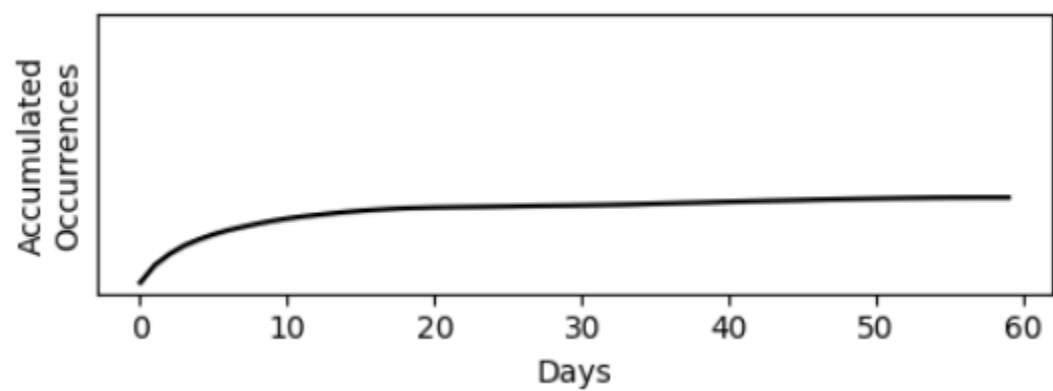
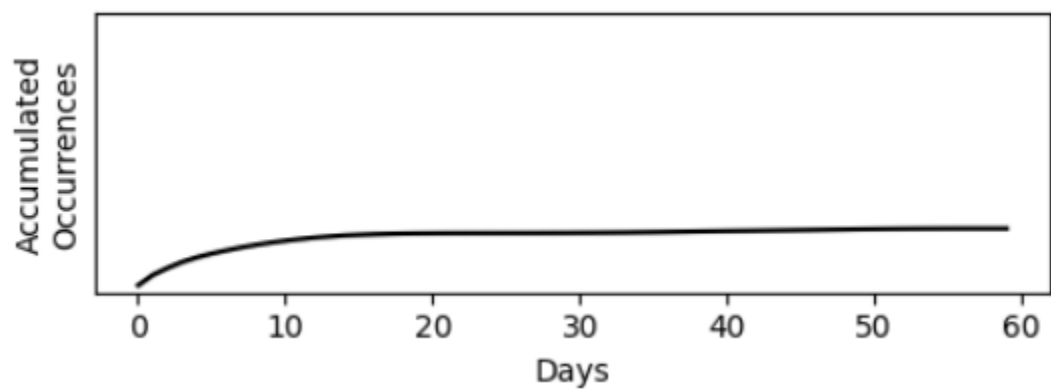
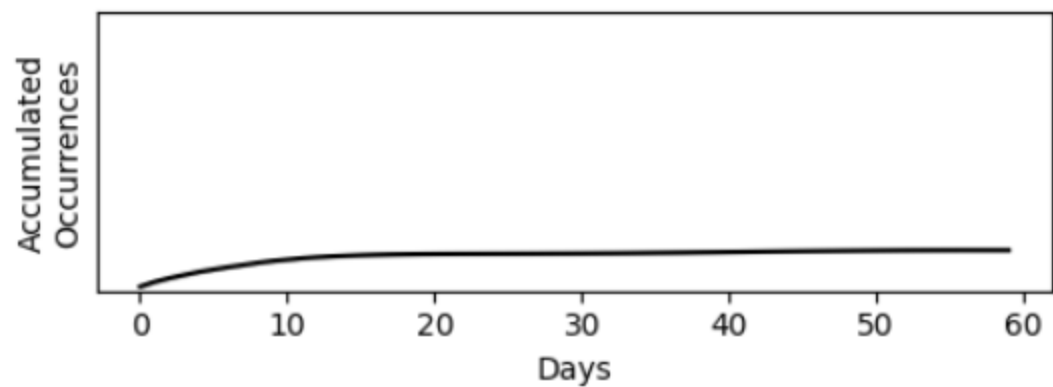


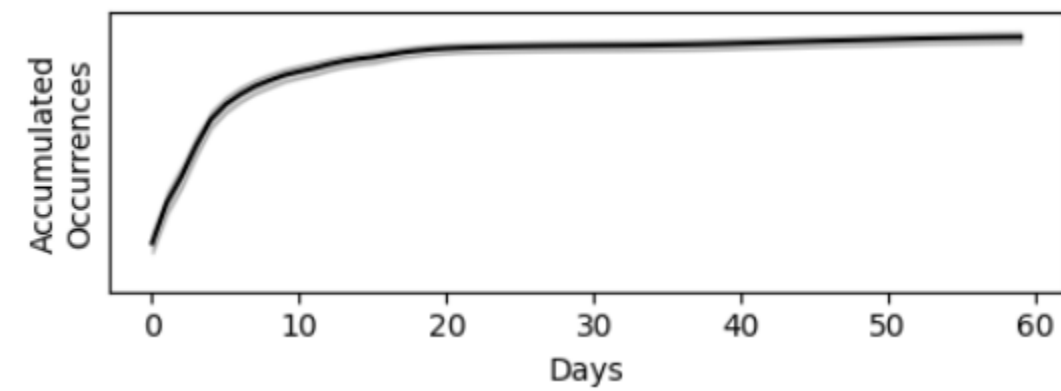
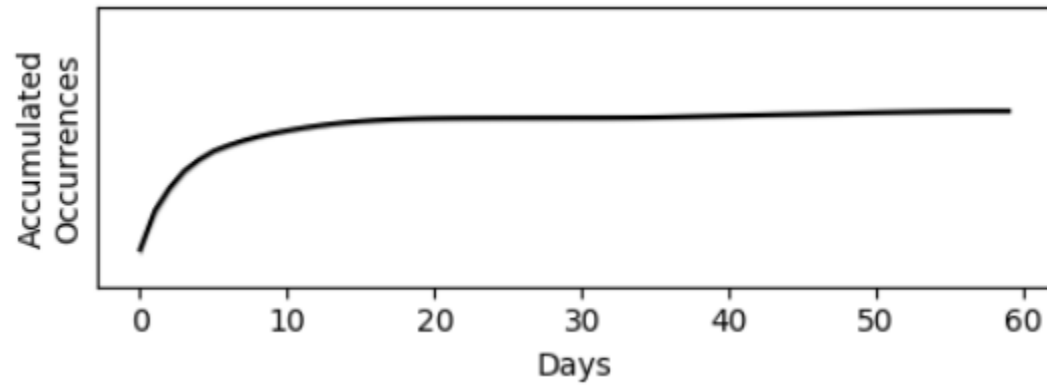
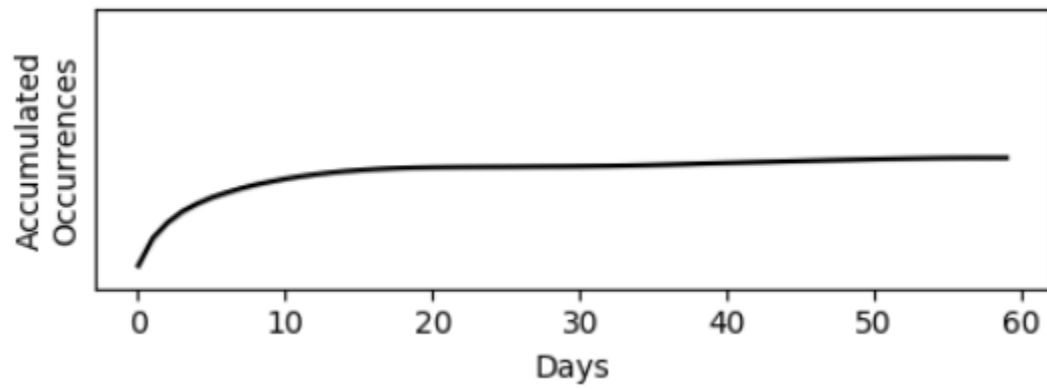
Appendix A. Time-Series Patterns

Mild Crash types

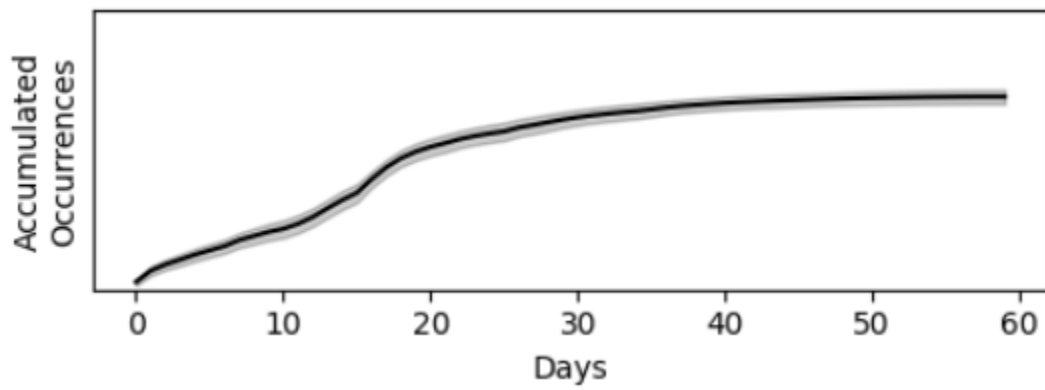
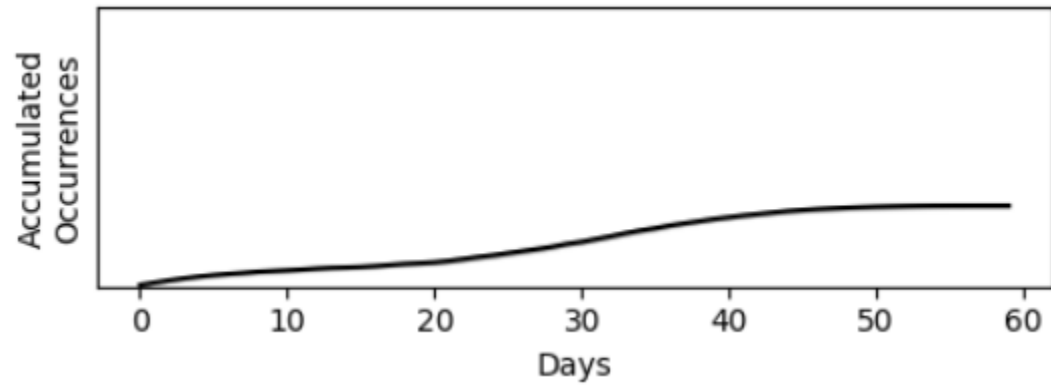




Outbreaks



Time Bombs



Appendix B. Hyperparameter Settings

Table B.1 Hyperparameter settings.

Model	Hyperparameter	Values
Logistic Regression	iterations	1000
Neural Network	Number of layers	2,3,4
	Number of neurons per layer	16,32,64,128
Gradient Boosting	Number of estimators	10,20,30,40,50,60,70,80,90,100,110,120
Random Forest	Number of estimators	10,20,30,40,50,60,70,80,90,100,110,120
K-Nearest Neighbor	Number of estimators	1,2,3,4,5,6,7,8,9,10