Goldsmith & Butcher 2017

Genocide Forecasting: Past Accuracy and New Forecasts to 2020

Acronyms

* Atrocity Forecasting Project(AFP)
* Political Instability Task Force (PTIF)
* Generalized Additive Model (GAM)

Definitions:

* Genocide + Politicide = promotion/execution of a group or their agents to destroy a particular group
* Genocide = victimizes groups are defined by communal characteristics
* Politicide = victimizes groups are defined by political opposition of regime/dominant groups

Summary

* Assessment of accuracy of genocide forecasts by AFP

Problem with Forecasting Genocides

* Genocides are rare 🡪 unbalanced data
* Traditional statistics and hypothesis testing is rare in social science (except elections)
* Lack of information of ultimate interest is often unknown
* Since the goal is to find the best combination of predictor variables, the forecaster often focuses on a specific aspects of the known data that are unique to that particular instance (resulting in overfitting)
* Traditional methods of assessing & interpreting models e.g R2 turn out not to be the best guides to predictive accuracy
* Genocides are discrete events 🡪 no data to measure the percentage/degree that a genocide occured

Solutions

* Utilize ‘out-of-sample’ approach, split data into training and testing groups

AFP Model Steps

1. Assemble a set of predictors based on exiting literature
2. Train model on sample of earlier data (in sample)
3. Test model on later data (out of sample)

General

* Forecast evaluated against “ground truth” of actual events after forecasting window has passed
* Additional data was used to access forecasting accuracy
  + Warnings from UN to particular country
  + Genocide watch cases
  + PITF Onsets
* Paper goes on to compare true/false postivies/negatives for AFP model