

CAN TERRORIST ATTACKS BE PREDICTED AND PREVENTED USING CLASSIFICATION ALGORITHMS?

Algorithms do not work for detecting terrorism. This method is ineffective, risky and inappropriate, with potentially 100,000 false positives for every real terrorist that the algorithm finds. It raises a wide range of technical and theoretical issues that limits the method's value. These can be categorized as three types of problems: problems associated with the high opportunity cost in comparatively more false negatives and false positives because the searched population is so small; problems building a sustainable statistical model; and problems with the model's negative recursive effects on itself, since the unrecognized hermeneutic premise of the method and the lack of a meta-model for its own modelling leads to stasis, corruption and simulacra effects. Thus the problem with predictive analytics is that the method lacks an explicitly automated model for how to analyze itself.

Problem with the high opportunity cost

There is no clearly defined pattern or statistical possibility of defining what can and must be seen as attempts, and failed attempts are often kept secret as an essential characteristic of criminal activity. Any algorithmic classification will result in false negatives as well as false positives, and as described previously, the size of these groups depends on the relationship between the total population and the population sought. This problem is also found in the classification algorithms of terrorism prevention: on the one hand, people or events classified as terrorists or terrorist attacks even though they are innocent (the so-called false positives); and on the other, guilty but overlooked terrorists and terrorist plans classified as non-terrorists and non-plans (the so-called false negatives), which appear normal but are in fact outliers. This is a practical resource allocation problem but also a theoretical statistical problem. The result is far too many false positives and false negatives, because the system is hypercomplex, builds on too little data and has far too excessive costs in the form of false positives/false negatives. The use of outlier algorithms creates many false positives because the method is used for large groups of people in which the group of true positives is very small.

Problem with building a sustainable statistical model

The problem is that terrorist attacks take place in social systems that are extreme power-law-distribution systems, in which a terrorist attack can be described as an event with great effect and very limited probability, making it difficult to predict because we cannot use historical data or experience to predict them or to predict future terrorists. It is not possible to use algorithmic, negative feedback mechanisms for prevention purposes in chaotic power-law distributed systems, because it is statistically impossible to determine the optimal spread of the value. It is therefore impossible to build predictive terrorism models based on historical data, as this assumes a non-existing stability and lack of randomness in terrorism. The dilemma is that the model will be either too general and vague or based on too specific data to be able to create useful predictions of other factors than itself. Therefore, predictive analytics in counter-terrorism requires a high frequency to be able to make sustainable predictions about future attacks. Fortunately, terrorist attacks are low-frequency events; unfortunately, this makes them impossible to predict.

Problems with the model's negative recursive effects on itself

The use of predictive analytics to fight terrorism is limited by the ability to reflexively categorize learning, meta-reflexive systems in which the construct is continuously corrupted because the strategies are pattern-dependent and dialectically adaptive. This meta-reflexivity requires an ability to meta-model that this method in counter-terrorism cannot accommodate automatically.



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