

DYNAMIC FLOWS MODELLER



ADDED VALUE: The Dynamic Flows Modeller (DFM) is an advanced tool for offline crime analysis and prediction, designed to provide a clear understanding of the relationship between online disinformation and offline crimes – current subject of debate. Utilising AI-based predictions, the analysis encompasses the most probable spatiotemporal evolution of offline crimes influenced or prompted by disinformation. Additionally, the tool seeks to deepen comprehension of the societal and cultural factors at the core of disinformation.

DATA & INFORMATION

1

The model is trained on American data, chosen for its comprehensive and publicly available nature in both crime and disinformation data. In the model utilised by LEAs, the machine receives the socioeconomic contextual data from different European nomenclature of territorial units for statistics (NUTS) regions. This ensures accurate crime forecasting in the specific area of each LEA. The relevant data is sourced from Eurostat and corresponds to the socioeconomic variables collected from the US during the model's training.

2

The output from the DFM will consist of coefficients representing the influence of specific socioeconomic factors on the occurrence of offline crime, considering the level of spread of a disinformation instance.

PRIVACY & ETHICS

The model is exclusively trained on open-source data, and later adapted for European use through Eurostat data, eliminating any privacy risks associated with the use of private information. From an ethical standpoint, the device only provides LEAs with an understanding of the likely type and location of crimes based on circulating disinformation and its intensity. It does not raise ethical concerns as it refrains from suggesting discriminatory profiling of any individual or group to the police. Decisions regarding resource allocation in response to the forecasts are made with the purview of the LEA. For instance, the recognition that large sporting events may indicate increased risk for illegal behaviours, akin to the spread of disinformation, often prompts a redistribution of resources to address the potential challenges.

USE

The primary purpose of the DFM is to assist LEAs in optimising their resource allocation. It serves as a crucial link between online disinformation to the corresponding offline consequences, leveraging knowledge acquired by the algorithm during its training period. Essentially, the DFM empowers LEAs to proactively adapt and prepare for upcoming events rather than merely reacting to them after occurrence.

The significance of disinformation in academia is underscored by the expanding body of literature on the subject. The introduction of the DFM marks a milestone, propelling research on disinformation beyond current empirical practices. Researchers now have an opportunity to initiate additional research projects based on insights provided by the DFM.

For instance, if a significant correlation between unemployment and disinformation-induced offline crime were to be discovered, it could pave the way for further research into the dynamics of internalising media-provided information in a broader context.



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