

Detection of anomalous samples based on automatic thresholds

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Abstract— The high demand for better services in cellular networks is the motivation behind the evolution of said network. Currently, the Open Radio Access Network (O-RAN) paradigm was proposed to provide more intelligent management of the user radio access, improving the quality of services, by applying Artificial Intelligence (IA); and Machine Learning (ML) algorithms. Despite their high potential, ML is highly dependent on the integrity of applied data, especially in the training stage. To avoid any data alteration, in this work an algorithm for anomaly detection in network metrics is proposed. This approach is based on a state machine to determine the network behaviour and Otsu thresholding. The algorithm performance is evaluated on data obtained from a 5G microcell.

Keywords— *Attack on data, Key Performance Indicators, Detection, Otsu thresholding, State Machine*

Acknowledgement - This work was supported partially by European Union-NextGenerationEU within the Framework of the Project ‘Massive AI for the Open RadIo b5G/6G Network (MAORI)’ (Ref. Real Decreto 1040/2021), and in part by Universidad de Malaga (UMA) within the grant ‘II Plan Propio de Investigación y Transferencia’.