

Large Language Model for Smart Inverter Cyber-Attack Detection via Textual Analysis of Volt/VAR Commands

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This letter demonstrates a proof-of-concept validation of the Large Language Model (LLM) for smart inverter cyberattack detection through textual control commands. The proposed method can detect the manipulation of Volt/VAR curves and the comparison results with state-of-the-art machine learning techniques highlight its efficacy in identifying cyber attacks. Test results obtained from a real distribution feeder in Colorado, USA, validate the high accuracy for attack classification as well as demonstrate the potential of LLMs in adding a robust security layer for cyber-attacks.