

**EXPLAINABLE ARTIFICIAL  
INTELLIGENCE FOR SMART CITY  
APPLICATION: A SECURITY,  
PRIVACY AND TRUSTED  
PLATFORM**

**Dr. E. LOGASHANMUGAM**  
Pro Vice Chancellor  
Satyabhama Institute of Science and Technology  
Chennai, India

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**Explainable Artificial Intelligence for Smart City Application: A Security, Privacy and Trusted Platform**

Author: E. Logashanmugam

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## ABSTRACT

Explainable Artificial Intelligence (XAI) refers to the ability of an AI system to explain its decision-making process in a way that is understandable to human experts and end-users. XAI is becoming increasingly important for applications such as smart city development, where the use of AI can have significant implications for security, privacy, and trust. Smart city applications rely on AI to process large amounts of data from various sources, such as sensors and cameras, to make decisions and automate processes that can improve the efficiency and quality of services. However, these AI systems can be vulnerable to security breaches and privacy violations, especially if they operate in sensitive areas such as public safety and surveillance.

To address these concerns, smart city applications should prioritize security, privacy, and trust in the design and implementation of AI systems. This includes the use of robust encryption and authentication protocols, secure data storage and transmission, and adherence to data protection regulations. In addition to these technical measures, XAI can also help to build trust and transparency in smart city AI systems. By providing clear and interpretable explanations of how decisions are made, XAI can help to improve accountability, detect biases and errors, and facilitate collaboration between human experts and AI systems.

To ensure the effectiveness and acceptance of XAI in smart city applications, it is crucial to involve stakeholders from various sectors, including government, industry, academia, and civil society, in the design and evaluation of AI systems. This can help to ensure that the needs and concerns of all stakeholders are taken into account, and that the resulting systems are ethical, reliable, and socially responsible.

**Keywords:** Explainable Artificial Intelligence (XAI), AI, Trust Management, Cyber Security, Smart City, IoT



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