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CHAPTER 8

EXPLAINABLE ARTIFICIAL INTELLIGENCE FOR SMART CITY

Explainable Artificial Intelligence (XAI) is a growing field that aims to create machine learning models and algorithms that are transparent and interpretable by humans. In the context of smart cities, XAI can be used to help citizens and decision-makers understand how AI systems are making decisions that affect their daily lives.

Smart cities rely on data and machine learning algorithms to make decisions about everything from traffic flow to public safety. However, these systems are often opaque and difficult for non-experts to understand. XAI can help to address this issue by providing explanations for the decisions made by AI systems in a way that is accessible and understandable to citizens.

For example, imagine a smart city system that uses machine learning to predict traffic patterns and adjust traffic lights in real-time. With XAI, citizens could be provided with an explanation for why a particular light was changed or why a certain route was recommended. This would help citizens to trust and understand the system, and could even lead to improvements in the system's performance as citizens provide feedback on the explanations.

Overall, XAI has the potential to make smart cities more transparent and accountable, while also improving the performance of AI systems. As smart cities continue to grow and evolve, it is likely that XAI will play an increasingly important role in ensuring that these systems are both effective and trustworthy.

Mobile devices are indeed generating massive traffic in the IoT domain, and the use of HTTP/HTTPS protocols is becoming increasingly popular in smart city applications. HTTP (Hypertext Transfer Protocol) and HTTPS (HTTP Secure) are the standard protocols used to exchange data between web servers and clients, and they are widely used for IoT communication.

With the growth of smart cities and the Internet of Things (IoT), the use of HTTP/HTTPS protocols is increasing due to their simplicity,

flexibility, and compatibility with a wide range of devices and platforms. Mobile devices such as smartphones and tablets are particularly popular in smart city applications because they are portable, easy to use, and provide a variety of features and functionalities.

By using HTTP/HTTPS protocols, mobile devices can communicate with IoT devices and services, exchange data and information, and control and monitor various aspects of the smart city infrastructure. This can include traffic management, energy consumption, public safety, waste management, and many other applications that contribute to a more sustainable, efficient, and livable urban environment.

HTTP/HTTPS protocols are critical agents in the realization of smart cities, and the widespread use of mobile devices in IoT applications is driving their adoption and evolution.