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(57) Abstract :

ABSTRACT The present disclosure introduces privacy preserved classification system for searching wifi connected devices through indoor localization. It provides groundbreaking approach to WiFi-based positioning in indoor environments while prioritizing data privacy. It comprises of hardware processing and memory unit 102, federated learning algorithm 104, centralised server 106 and client server architecture 108. Leveraging federated learning algorithms 104, the system enables collaborative model training across distributed client nodes, ensuring that WiFi data remains confidential throughout the process. A centralized server 106 orchestrates model aggregation and distribution, facilitating seamless communication and coordination between client nodes. The client-server architecture 108 offers real-time indoor localization capabilities, empowering users with accurate device positioning within complex indoor environments such as campuses and shopping malls. REFERENCE FIG 1

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