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Artificial Intelligence in Wi-Fi Networks

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AFFILIATION

Department of
Computer Systems and
Technology ,
Faculty of Computer
Science and Information
Technology



Memorandum of understanding between TP-Link Malaysia and University Malaysia

AI-Driven Wi-Fi Environment

– By Assoc. Prof. Dr. Ang Tan Fong, Prof. Ir. Dr. Chan Chee Seng,
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By integrating AI into Wi-Fi environments, networks become more effective and responsive to user and device needs. This project aims to develop and deploy a smart Wi-Fi network that leverages artificial intelligence to optimize performance, enhance security, and improve user experience. With AI-driven Wi-Fi, network performance is greatly improved through load balancing and channel selection optimization, leading to faster and more dependable connections. Additionally, by identifying and addressing risks instantly, AI's predictive capabilities improve network security by reducing downtime due to unforeseen problems.

The project aims to produce a smart network management that utilizes the AI-driven features which optimize bandwidth allocation and device management, prioritizing critical applications and users. In addition, with AI capabilities, the network can provide better threat detection and response, safeguarding sensitive data and user privacy. By

implementing the latest WiFi7 technology, the faculty is looking to enhance their connectivity, positioning UM at the forefront of innovation in education.

This initiative is a partnership between TP-Link Malaysia and Universiti Malaya (UM) aimed at implementing an AI-powered Wi-Fi7 network at the Faculty of Computer Science and Information Technology (FCSIT). As part of the three-year partnership, TP-Link will supply technical assistance and equipment. This collaboration could significantly enhance the educational environment at FCSIT and serve as a model for other institutions looking to integrate advanced networking technologies.



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