OPTIMIZING GENETIC ALGORITHMS FOR SERVICE SCHEDULING IN SMART TOURISM DESTINATIONS

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ABSTRACT
Smart tourism destinations leverage advanced technologies to enhance the overall visitor experience, promote sustainable practices, and optimize resource utilization. One of the critical challenges faced by smart tourism destinations is the efficient scheduling of services to meet the diverse needs of tourists while ensuring sustainability and resource optimization. The purpose of this study was to explore the use of the implications of genetic algorithms (GAs) for optimizing scheduling services to support smart tourism destinations. The research methodology involved implementation of a genetic algorithm-based approach for service scheduling that would result in improved efficiency and customer satisfaction compared to traditional scheduling methods. The collected data were analysed using thematic analysis, and the theoretical model was developed based on the findings. The results showed that GAs could significantly improve the efficiency of service scheduling with advantages over traditional scheduling methods. Moreover, GAs could adapt to changing circumstances and reoptimize the schedules in real time, thus allowing for greater flexibility and responsiveness in the face of unexpected events or changes in demand. Additionally, this could help service providers improve their resource utilization and reduce the cost-of-service delivery, while also enhancing customer satisfaction by minimizing the waiting times and improving service quality. Furthermore, this paper discusses the potential economic, social, and environmental benefits of improved efficient service scheduling for various stakeholders in the tourism industry. The study highlights the potential for further research and development in the use of GAs for service scheduling in tourism, including the exploration of different types of tourism services and the incorporation of real-time data into the scheduling process.

Keywords: Genetic Algorithms, Optimization, Service Scheduling, Smart Tourism, Smart Destination

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