

# **Research on indoor navigation and positioning system for smart parking lots**

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**Abstract:** In the context of increasingly complex urban traffic and rising parking lot usage density, providing smart indoor navigation and positioning solutions is an important requirement. This topic focuses on building a navigation and positioning system for smart parking lots with the goal of optimizing the process of finding and moving vehicles. The research method includes a combination of spatial positioning theory and experimental deployment in a real-world environment. The expected outcome of the topic is to provide an efficient system that can be widely applied, helping to improve the parking lot user experience and reduce traffic-related issues.

**Keywords:** Indoor positioning, Navigation system, Smart parking, IoT technology, Traffic solution