

A NOVEL AND SECURE SMART PARKING SYSTEM

A project report

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BACHELOR OF TECHNOLOGY

IN

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CERTIFICATE

This is to certify that the project work is entitled "A NOVEL AND SECURE SMART PARKING SYSTEM" submitted by U.RANI (18815A0413), G.SAIKUMAR (18815A0404), Y.HEMANTH KUMAR (18815A0415), M.GAYATHRI (17811A0434) in partial fulfillment for the degree of bachelor of technology in Electronics And Communication Engineering, at Avanthi Institute Of Engineering And Technology, Makavarapalem, Visakhapatnam is an bonafied work carried out by them, under the guidance and supervision during 2017-2021.

The results embodied in this project work have not been submitted to any other university or institute for the award of any degree

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EXTERNAL EXAMINER

A NOVEL AND SECURE SMART PARKING SYSTEM

ABSTRACT

Nowadays, finding a secure parking lot in modern cities deemed as very hard and time-consuming task. Leaving negative implications on traffic congestion, air pollutions, climate changes, etc. are also creating difficult situations to find the secure parking lot on required time. Thus, Smart Parking System (SPS) deemed inevitable option to solve those issues and build a comprehensive smart transportation system. Toward this end, this paper aims to design a secure and smart parking monitoring, controlling and management solutions based on the integration of Wireless Sensor Network (WSN), Radio Frequency Identification (RFID), Adhoc Network, and Internet of Things (IoT). Considering cyber security issues in IoT environment, we adopt a lightweight cryptographic algorithm that meets IoT device requirements in term of computational cost and energy consumption. Fog computing has been adapted to process and manipulate sensitive data within the edge of the network and accelerate response time for any emergency circumstance. The proposed model provides real-time information for detecting parking lots and reservation, e-payment solutions to mitigate traffic congestion, parking management optimization and enhance user experience while preserving user privacy and security.