

# Smart Parking System Using IOT

Prof. Ankita Patil<sup>1</sup>, Gayatri Abhang<sup>2</sup>, Vaishnavi Ahirrao<sup>3</sup>, Anuja Waghmare<sup>4</sup>, Vaibhav Wani<sup>5</sup>

Assistant Professor, Department of Information Technology<sup>1</sup>

Student, Department of Information Technology<sup>2,3,4,5</sup>

SPPU's Zeal College of Engineering & Research, Pune, Maharashtra, India

**Abstract:** People having vehicles face parking problems in most metropolitan cities, especially during peak hours. The difficulty roots from not knowing where the parking spaces are available at the given time, even if this is known; many vehicles may pursue a small number of parking spaces which in turn leads to serious traffic congestion. This paper focuses on different smart parking techniques developed to overcome said problem using various wireless sensor network and providing real-time data analysis from the sensors, some papers include system based on resource allocation and reservation of parking lot which have various problems in efficiently achieving the goals. The given paper would be useful for new researchers for study of various guided parking and information techniques and algorithms which are covered in this paper.

**Keywords:** Smart Parking, guided parking, sensors, techniques, algorithm

## REFERENCES

- [1] Rico, J., Sancho J., Cendon, B., & Camus, M. (2013, March). Parking easier by using context information of a smart city: Enabling fast search and management of parking resources. In Advanced Information Networking and Applications Workshops (WAINA), 2013 27th International Conference on (pp. 1380-1385). IEEE.
- [2] Zheng, Y., Rajasegarar, S., & Leckie, C. (2015, April). Parking availability prediction for sensor-enabled car parks in smart cities. In Intelligent Sensors, Sensor Networks and Information Processing (ISSNIP), 2015 IEEE Tenth International Conference on (pp. 1-6). IEEE.
- [3] Zhou, F., & Li, Q. (2014, November). Parking Guidance System Based on ZigBee and Geomagnetic Sensor Technology. In Distributed Computing and Applications to Business, Engineering and Science (DCABES), 2014 13th International Symposium on (pp. 268-271). IEEE.
- [4] International Parking Institute, "2012 Emerging Trends in Parking".
- [5] T. N. A. M. Pham, M. Tsai, and D. U. C. B. Nguyen, "A Cloud-Based Smart-Parking System Based on Internet-of-Things Technologies," pp. 1581–1591, 2015.
- [6] S. A. El-seoud, H. El-sofany, and I. Taj-eddine, "Towards the Development of Smart Parking System using Arduino and Web Technologies," no. 978, pp. 10–16, 2016.
- [7] R. H. Giva Andriana, Anak Agung, "Sensor Comparison for Smart Parking System," pp. 4–9, 2012.
- [8] N. Hazrin, H. Mohamad, M. H. Badiozaman, and H. Daud, "Smart Parking Reservation System using Short Message Services (SMS)," 2008.
- [9] M. N. M. Yasin and S. K. Khamas, "Measurements and Analysis of a Probe-Fed Circularly Polarized Loop Antenna Printed on a Layered Dielectric Sphere," in IEEE Transactions on Antennas and Propagation, vol. 60, no. 4, pp. 2096-2100, April 2012.