Lecture Notes in Electrical Engineering 605

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Bijaya Ketan Panigrahi
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Preface

International Conference on Emerging Trends in Information Technology (ICETIT 2019) held at Institute of Information Technology and Management, New Delhi, India, during June 21 and 22, 2019. The objective of this conference is to provide an international forum to interact, deliberate and stimulate the innovative minds to promote high-quality research in the emerging.

High-quality papers are submitted in ICETIT 2019 from researchers from various parts of the globe, and after the peer review process with the help of Technical Program Committee members, we finally accepted 100 papers for publication with an acceptance rate of 15.38%. We have received around 650 submissions on different tracks and from twenty-four overseas countries.

The conference is technically supported and promoted by Computer Society of India (CSI), International Society for Computers and their Applications (ISCA), USA, Indian Society for Technical Education (ISTE), Acoustical Society of India (ASI) and Sciences and Technologies of Image and Telecommunication (SETIT) Research Unit, University of Sfax, Tunisia. This conference is financially supported by the Ministry of Electronics and Information Technology (MeitY), Defence Research Development Organisation (DRDO) and Guru Gobind Singh Indraprastha University, Delhi.

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of Information Technology, Waknaghat, HP, India, have delivered the keynoted and invited talk during the conference. Selected papers were presented in various parallel tracks in six sessions during two days of conference.

We also recognize the efforts and valuable suggestions of our International and National Advisory Committee. Many eminent academician and researchers have supported us to review and in selecting the papers from different tracks of conference.

We express our sincere gratitude to our publication partner, LNEE, Springer, for believing us.

June 2019

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Contents

Internet of Everything and Network Technologies

Kitchen Genie: An Intelligent Internet of Things System for Household Inventory Management

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Abstract. This research paper is all about a system Kitchen Genie an intelligent kitchen that proposes a system that would make the household, especially the kitchen, intelligent. This will be done by keeping track of its inventory automatically, without the user having to interact with the products. This system would not only be useful in a household but it can also be adapted on a larger scale such as a restaurant kitchen or in a supermarket. It could be very useful for those families that both parents work and when they get home have to do all the housework besides going shopping, etc. Therefore, Kitchen Genie would save a lot of time. It could also save a lot of money for those people who have a large storage space. This makes it hard to keep track of what items they have and end up throwing them away because they are past their expiry date. This system does all that is mentioned above with the use of a NEX-6810 Ultra-High Frequency Mid-Range Radio Frequency Identification Reader and Higgs3 stickers. We have also designed a hardware (Circuit Diagram) and tested it to show the results.

Keywords: Grocery shopping · Inventory management · Kitchen Genie · Radio Frequency Identification and Tag

1 Introduction

We are witnessing the dawn of the Internet of Things (IoT). IoT is the concept whereby objects that we use on a daily basis such as the fridge, the washing machine, etc. are becoming connected and intelligent. The Internet of Things is combining all these

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