PSG COLLEGE OF ARTS & SCIENCE

An Autonomous College- Affiliated to Bharathiar University
Accredited with A++ Grade by NAAC (4th Cycle)
College with Potential Excellence (Status Awarded by the UGC)
Star College Status Awarded by DBT –MST
An ISO 9001:2015 Certified Institution
Coimbatore – 641014

DEPARTMENT OF COMPUTER SCIENCE (SF)

Organised by

INTERNATIONAL CONFERENCE ON RECENT TRENDS IN COMPUTATIONAL TECHNOLOGIES AND SUSTAINABLE DEVELOPMENT GOALS (ICRTCTS - 2025)

25th MARCH 2025

Editors
Dr.C.Thirumoorthi
Dr.S.Rekha

Department of Computer Science (SF)
PSG College of Arts & Science
Civil Aerodrome Post, Coimbatore, Tamil Nadu 641014, India
Phone: 0422-4303300
Website: https://www.psgcas.ac.in/

PSG College of Arts & Science

An Autonomous College- Affiliated to Bharathiar University
Accredited with A^{++} Grade by NAAC (4th Cycle)
College with Potential Excellence (Status Awarded by the UGC)
Star College Status Awarded by DBT –MST
An ISO 9001:2015 Certified Institution
Coimbatore – 641014

DEPARTMENT OF COMPUTER SCIENCE (SF)

ORGANIZES BY

INTERNATIONAL CONFERENCE ON RECENT TRENDS IN COMPUTATIONAL TECHNOLOGIES AND SUSTAINABLE DEVELOPMENT GOALS
(ICRTCTS - 2025)

25th MARCH 2025

Editors
Dr.C.Thirumoorthi
Dr.S.Rekha

Department of Computer Science (SF)
PSG College of Arts &Science
Civil Aerodrome Post, Coimbatore, Tamil Nadu 641014, India
Phone: 0422-4303300
Website: https://www.psgcas.ac.in/

Edition: First

Year: March 2025

ISBN: **978-81-986118-7-1**

Publisher

(International Publisher)
Australia, Chennai & Kanyakumari.
Phone: +91 6384730258
E-Mail: editor@multispectrum.org
www.multispectrum.org

IOT-ENABLED SMART CITY INFRASTRUCTURE: A FRAMEWORK FOR SUSTAINABLE URBAN DEVELOPMENT

Dr S.Sharmila
Assistant Professor, Department of Computer Science, Nallamuthu Gounder Mahalingam College, Pollachi.

Dr A.Kanagaraj
Assistant Professor, Department of Computer Science, Kristu Jayanti College, Bengaluru.

Abstract

The rapid expansion of urban populations has increased the demand for smarter, more efficient, and sustainable city infrastructures. The Internet of Things (IoT) has emerged as a key enabler for smart city development, providing real-time data collection, analytics, and automation to optimize urban services. This paper presents a comprehensive framework for IoT-enabled smart city infrastructure, focusing on critical areas such as smart grids, water management, waste management, intelligent transportation, environmental monitoring, and public safety. The integration of IoT in urban systems enhances operational efficiency, reduces environmental impact, and improves the quality of life for citizens This paper explores emerging solutions, including AI-driven IoT, block chain integration, and 5G connectivity, to address these challenges and shape the future of sustainable urban development.

Keywords-Internet of Things (IoT), Smart City, Infrastructure Management, Framework, sustainable urban development.