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Patent Search

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Inventor

Name	Address	Country
Dr. M.Ramkumar Prabhu	Professor, Department of ECE, Saveetha School of Engineering, Saveetha Institute of Medical and Technical Science, Chennai, Tamil Nadu, India	India
Prof. Suvarna A Bahir	Assistant Professor, Department of Computer Engineering, Trinity Academy of Engineering, Bopdev Ghat, Yewalewadi, Pune, 411048, India	India
Ms. Punam Udaysing Rajput	Lecturer and Phd Scholar, Department of Computer Engineering, Bharati Vidyapeeth Jawaharlal Nehru Institute of Technology, Katraj, Dhankwadi, Pune-46, India	India
Mr. Feroz Khan	Assistant Professor, Department of Computer Science and Engineering, Koneru Lakshmaiah Education Foundation, Vaddeswaram, Andhra Pradesh, India	India
Digambar Jakkan	Department of E&TC, Trinity Academy of Engineering, Pune, Warje- 411058, India	India
Mr. Sankaravaradhakarthikeyan V	Assistant Professor Cum Vice Principal, Department of Management and Research, AVS College of Arts & Science (Autonomous), Ramalingapuram, Attur Main Road, Salem- 636106, Tamil Nadu, India	India
Dr. Tulika Chakrabarti	Associate Professor, Department of Chemistry, Sir Padampat Singhania University, Udaipur, 313601, Rajasthan, India	India
Dr. K Baba Pai	Director Industry Collaboration, ITM SLS Baroda University, Vadodara, 391510, Gujarat, India	India
Vogirala Nandini	Assistant Professor, Department of Computer Science and Engineering, Koneru Lakshmaiah Education Foundation, Vaddeswaram, 522502, Andhra Pradesh, India	India
M. Sunil Kumar	Department of Mechanical Engineering, Institute Aeronautical Engineering, Dundigal, Hyderabad, Telangana	India

Applicant

Name	Address	Country
Dr. M.Ramkumar Prabhu	Professor, Department of ECE, Saveetha School of Engineering, Saveetha Institute of Medical and Technical Science, Chennai, Tamil Nadu, India	India
Prof. Suvarna A Bahir	Assistant Professor, Department of Computer Engineering, Trinity Academy of Engineering, Bopdev Ghat, Yewalewadi, Pune, 411048, India	India
Ms. Punam Udaysing Rajput	Lecturer and Phd Scholar, Department of Computer Engineering, Bharati Vidyapeeth Jawaharlal Nehru Institute of Technology, Katraj, Dhankwadi, Pune-46, India	India
Mr. Feroz Khan	Assistant Professor, Department of Computer Science and Engineering, Koneru Lakshmaiah Education Foundation, Vaddeswaram, Andhra Pradesh, India	India
Digambar Jakkan	Department of E&TC, Trinity Academy of Engineering, Pune, Warje- 411058, India	India
Mr. Sankaravaradhakarthikeyan V	Assistant Professor Cum Vice Principal, Department of Management and Research, AVS College of Arts & Science (Autonomous), Ramalingapuram, Attur Main Road, Salem- 636106, Tamil Nadu, India	India
Dr. Tulika Chakrabarti	Associate Professor, Department of Chemistry, Sir Padampat Singhania University, Udaipur, 313601, Rajasthan, India	India
Dr. K Baba Pai	Director Industry Collaboration, ITM SLS Baroda University, Vadodara, 391510, Gujarat, India	India
Vogirala Nandini	Assistant Professor, Department of Computer Science and Engineering, Koneru Lakshmaiah Education Foundation, Vaddeswaram, 522502, Andhra Pradesh, India	India
M. Sunil Kumar	Department of Mechanical Engineering, Institute Aeronautical Engineering, Dundigal, Hyderabad, Telangana	India

Abstract:

The invention presents a novel method and system for evaluating the efficacy and power consumption of Internet of Things (IoT) applications through the use of non
evolution models. Recognizing the limitations of traditional linear assessment tools, this invention captures the intricate dynamics inherent in interconnected IoT dev
providing a comprehensive, adaptive, and granular view of system behavior. By continuously integrating real-time data and factoring in various influencing paramete
proposed models offer enhanced predictability, sustainability, and insights, reshaping the way stakeholders understand and optimize IoT systems.

Complete Specification

Description:The present invention relates generally to the field of Internet of Things (IoT). More specifically, the invention pertains to the assessment of efficacy and
consumption of IoT applications through the application of various nonlinear evolution models. This method provides insights into the performance, adaptability, a
energy efficiency of IoT systems over time, enhancing the prediction accuracy of system behavior and resource optimization.
Background of the invention:
The Internet of Things (IoT) represents a vast network of interconnected devices, from household appliances to industrial machinery, which collect, share, and analy
Over the last few years, the proliferation of these devices has been remarkable, leading to a myriad of applications that permeate every aspect of our daily lives. Th
applications include smart home systems, health monitoring devices, automated agriculture, energy management, and many more. As the IoT ecosystem continues
expand, so does the need for a comprehensive understanding of how these applications function in terms of both efficacy and power consumption.
Historically, the evaluation of application efficacy and power consumption in the IoT space was primarily linear. That is, models and evaluations assumed a straightf
relationship between input parameters and performance outputs. However, as IoT devices have become more complex and integrated into multifaceted systems, t
interactions between components have become increasingly nonlinear. This complexity arises from a combination of factors: devices have different power profiles,
applications may involve multiple stages of data processing and transmission, and user behaviors can vary dramatically in unpredictable ways.
To navigate this complexity, researchers and engineers have recognized the need for models that can capture the intricate relationships and dependencies in IoT sy
Traditional linear models, while useful in simpler scenarios, often fall short when it comes to predicting real-world performance, especially in scenarios where syste
behaviors are influenced by a multitude of interconnected factors.

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