Patent Search

Invention Title	AN INTRUSION DETECTION SYSTEM BASED ON MACHINE LEARNING FOR MOBILE CLOUDS WITH DIVERSE CLIENT NETWORKS
Publication Number	36/2023
Publication Date	08/09/2023
Publication Type	INA
Application Number	202341057378
Application Filing Date	27/08/2023
Priority Number	
Priority Country	
Priority Date	
Field Of Invention	COMPUTER SCIENCE
Classification (IPC)	G06N0020000000, G06F0021550000, G06N0020200000, H04L0012460000, G06F0021310000

Inventor

Name	Address	Country
Dr.Kalyankumar Dasari	HOD & Associate Professor, Department of CSE-CS, Chalapathi Institute of Technology, A.R.Nagar, Mothadaka, Guntur District, Andhra Pradesh, India. Pin Code:522016	India
Mr.Kolluri David Raju	Associate Professor, Department of CSE, Hyderabad Institute of Technology and Management, Medchal-Malkajgiri, Hyderabad, Telangana, India. Pin Code:501401	India
Ms.Akula Rajitha	Assistant Professor, Department of IT, Institute of Aeronautical Engineering, Dundigal Road, Dundigal, Hyderabad, Telangana, India. Pin Code:500043	India
Ms.Aparna Gullapelly	Associate Professor, Department of CSE, Hyderabad Institute of Technology and Management, Medchal-Malkajgiri, Hyderabad, Telangana, India. Pin Code:501401	India
Mrs.T.Tritva Jyothi Kiran	Assistant Professor, Department of Computer Science, Adikavi Nannaya University MSN Campus, Kakinada, Andhra Pradesh, India. Pin Code: 533005	India
Mr.Nagari Naveen Kumar	Assistant Professor, Department of ECE, Anantha Lakshmi Institute of Technology and Sciences affiliated to JNTUA, Ananthapuramu, Anantapur, Anantapur District, Andhra Pradesh, India. Pin Code: 515721	India
Mr.M.Sreedhar	Assistant Professor Adhoc, Department of ECE, JNTUA College of Engineering, Ananthapuramu, Andhra Pradesh, India. Pin Code:515002	India
Dr.Jitendra Singh	Associate Professor, Department of CSE, SRM Institute of Science and Technology, Delhi NCR Campus, Modinagar, Ghaziabad, Uttar Pradesh, India. Pin Code:201204	India
Dr.P.Upendra Kumar	Assistant Professor, Department of Electrical and Electronics Engineering, GMR Institute of Technology, Rajam, Vizianagaram District, Andhra Pradesh, India. Pin Code:532127	India
Dr.K.Lakshmana Rao	Associate Professor, Department of CSE, GMR Institute of Technology, Rajam, Vizianagaram District, Andhra Pradesh, India. Pin Code:532127	India

Applicant

Name	Address	Country
Dr.Kalyankumar Dasari	HOD & Associate Professor, Department of CSE-CS, Chalapathi Institute of Technology, A.R.Nagar, Mothadaka, Guntur District, Andhra Pradesh, India. Pin Code:522016	India
Mr.Kolluri David Raju	Associate Professor, Department of CSE, Hyderabad Institute of Technology and Management, Medchal-Malkajgiri, Hyderabad, Telangana, India. Pin Code:501401	India
Ms.Akula Rajitha	Assistant Professor, Department of IT, Institute of Aeronautical Engineering, Dundigal Road, Dundigal, Hyderabad, Telangana, India. Pin Code:500043	India
Ms.Aparna Gullapelly	Associate Professor, Department of CSE, Hyderabad Institute of Technology and Management, Medchal-Malkajgiri, Hyderabad, Telangana, India. Pin Code:501401	India
Mrs.T.Tritva Jyothi Kiran	Assistant Professor, Department of Computer Science, Adikavi Nannaya University MSN Campus, Kakinada, Andhra Pradesh, India. Pin Code: 533005	India
Mr.Nagari Naveen Kumar	Assistant Professor, Department of ECE, Anantha Lakshmi Institute of Technology and Sciences affiliated to JNTUA, Ananthapuramu, Anantapur, Anantapur District, Andhra Pradesh, India. Pin Code: 515721	India
Mr.M.Sreedhar	Assistant Professor Adhoc, Department of ECE, JNTUA College of Engineering, Ananthapuramu, Andhra Pradesh, India. Pin Code:515002	India
Dr.Jitendra Singh	Associate Professor, Department of CSE, SRM Institute of Science and Technology, Delhi NCR Campus, Modinagar, Ghaziabad, Uttar Pradesh, India. Pin Code:201204	India
Dr.P.Upendra Kumar	Assistant Professor, Department of Electrical and Electronics Engineering, GMR Institute of Technology, Rajam, Vizianagaram District, Andhra Pradesh, India. Pin Code:532127	India
Dr.K.Lakshmana Rao	Associate Professor, Department of CSE, GMR Institute of Technology, Rajam, Vizianagaram District, Andhra Pradesh, India. Pin Code:532127	India

Abstract:

The present invention introduces an advanced intrusion detection system (IDS) optimized for mobile cloud environments. Leveraging the capabilities of machine lear system monitors and analyzes network traffic to proactively detect and thwart potential threats. A unique blend of supervised and unsupervised learning models ens comprehensive protection against both known and emerging cyber challenges. The invention's modular design caters to the diverse device landscape of mobile cloud tailored protection while ensuring scalability. An integrated feedback loop facilitates continuous improvement, keeping the system adaptive and resilient in the dynar landscape of mobile cloud platforms.

Complete Specification

Description:The present invention generally relates to the domain of information and cyber security, particularly to the detection of unauthorized or malicious activ digital environments. More specifically, this invention pertains to an intrusion detection system (IDS) that leverages machine learning techniques and is designed fo deployment in mobile cloud environments. This system is adept at monitoring and analyzing traffic originating from a variety of client networks, ensuring enhanced security for devices and applications operating within the dynamic and distributed framework of mobile clouds.

Background of the invention:

The rapid proliferation of mobile devices, coupled with the dynamic advancements in cloud computing technologies, has brought forth an interconnected digital ec that has reshaped the way users access, store, and share information. Within this landscape, mobile clouds have emerged as pivotal platforms, merging the agility a ubiquity of mobile devices with the power and scalability of cloud computing infrastructure. As users and enterprises increasingly depend on these mobile clouds fo operations and sensitive transactions, the security and integrity of these platforms become paramount.

Historically, traditional intrusion detection systems (IDS) were primarily designed for static networks. These systems relied on a set of predefined rules or heuristics identify and thwart potential threats. However, the unique architecture and diversity inherent in mobile clouds — characterized by heterogeneous devices, dynamic resource allocation, and varied network topologies — present challenges that conventional IDS are ill-equipped to handle.

The first challenge is the dynamic nature of mobile clouds. Traditional networks typically exhibit more stable and predictable traffic patterns. Mobile clouds, in contr have ever-changing user populations, with devices constantly joining and leaving the network, adjusting their locations, or switching between different types of netv (e.g., Wi-Fi, 4G, 5G). Such a dynamic environment makes it difficult for rule-based IDS to stay relevant, as their heuristics might quickly become outdated.

View Application Status