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ADITYA

Institute of Technology and Management

(An Autonomous Institution)

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Department of Information Technology

VISION

To evolve into a premier engineering institute in the country by continuously enhancing the range of our competencies, expanding the gamut of our activities and extending the frontiers of our operations.

MISSION

Synergizing knowledge, technology and human resource, we impart the best quality education in Technology and Management. In the process, we make education more objective so that the efficiency for employability increases on a continued basis.



ADITYA

Institute of Technology and Management

(An Autonomous Institution)

Department of Information Technology

Vision of the Department

Create high-quality engineering professionals through research, innovation and teamwork for Information Technology services with outstanding faculty, facilities and education.

Mission of the Department

- M1:** Information Technology program dedicates itself to provide students with a set of skills, knowledge and attitude that will permit its graduates to succeed and thrive as successful information technologists.
- M2:** Enhance overall personality development which includes innovative thinking, Team work, entrepreneur skills, communication skills, employability skills and ethical conduct.
- M3:** Ensuring effective teaching–learning process to provide in-depth knowledge of Inter disciplinary areas.
- M4:** Providing industry interactions through consultancy and sponsored research for the societal needs.



Dr. K. Someswara Rao
Chairman

MESSAGE

At AITAM, we are committed to excellence in everything we do. We strive to mould the students in balancing intellectual and practical skills to become leaders in all the fields of Technical know-how and Management. We have created the finest facilities for the students to make the most of their scholastic pursuits. We are closely aligned with the corporate world which ensures exchange of ideas and experiences that keep our curricula focused on current developments and challenges in the field of engineering. We are firmly committed to research and consulting activities to contribute to the development of the discipline of engineering. Our vitality lies in our spirit of innovation. Our strength lies in our pragmatic approach. Our success lies in our will to do.



Sri. L L Naidu
Secretary

MESSAGE

Aditya Institute of Technology and Management is founded to meet the increasing demand for competent engineering graduates. Within a short span of its inception, AITAM has grown to be a premier engineering college of its kind and has won laurels and kudos from the industry. The faculty and staff in AITAM are dedicated to providing first-class education that instils strong and potent basic knowledge for sound practice in science and engineering for the well-being of the society. The Institute offers curricula that nurtures creative thinking and prepares students for productive and rewarding careers. The Institute offers programmes that deepen learning experiences of our students and prepare them for successful careers as engineers.



Prof. V V Nageswara Rao
Director

MESSAGE

Engineering education at AITAM is indeed a rewarding intellectual experience. The Institute prepares the engineering professionals of tomorrow imbued with insight, imagination and ingenuity to flourish as successful engineers. Our programs are attuned to the needs of the changing times. The classrooms are ultra-modern; the library and labs are cutting-edge; and all the members of the faculty are workaholic professionals and masters in their fields. Not surprisingly, our students are recruited by such renowned organizations as HCL, Satyam, WIPRO, INFOSYS, TCS, Visual Soft, Innova-Solutions and InfoTech. The exceptional dedication of our students, faculty and staff, and our collaborations with Industry and other institutions ensure that the Institute is well-poised to create a unique niche in the horizons of engineering education.



Dr.K B Madhu Sahu
Principal

MESSAGE

It is only through knowledge that man attains immortality. Knowledge has to expand or grow to remain as knowledge. The road to excellence is toughest, roughest and steepest in the Universe. The world requires and honors only excellence. Available information has to be directed by wisdom and intelligence to create new knowledge. Promotion of creativity is the new role of education. It is only through creative thinking that the present and future problems can be addressed to find dynamic solutions. Technology should be used to help remove poverty from the world. In fact forty per cent of the world's poor are in India. Confidence leads to capacity. It is faith in oneself that produces miracles. Education at AITAM helps build character, strengthen the mind, expand the intellect and establish a culture of looking at problems in a new perspective. The student is put through rigorous training so that he can stand on his own feet after leaving the portals of the Institute.



Dr. B V Ramana
HOD, IT Department

MESSAGE

Information Technology is a professional engineering discipline that deals with application of computers to store, retrieve, transmit and manipulate data. Our department has a team of qualified and experienced faculty and staff members and we are motivation both faculty and students continuously to improve the quality of education and to maintain its position of leadership in engineering and technology. The department guides the students to develop their technical skills and motivate them to learn in research methodology. Our department has been conducting National workshops and organizing seminars since its beginning to keep the faculty and students with the latest developments in the field of technical education. Our department faculties are actively published in reputed international and national journals and actively participated in various international and national conferences to publish papers.

B.Tech Project Abstracts

SNo	Roll No.	Name of the Student	Project Title
1	11A51A1213	K.Karteek	ANDROID APP POOL

ABSTRACT

As mobiles are playing crucial role on each individual's life they became part of the life. Mobiles and their applications are now useful in many ways and they are making the survival easy for the men. This project tells about the collection of applications in the form of pool, this pool comprises of mobile attendance, mobile time table, and funny applications like updated piano, friendship calculator.

Mobile attendance will help the lecturers to take attendance easily, securely and is less error prone. For this, we are implementing software "Mobile Phone Based Attendance System (MPBAS)" based on Android Technology.

The other application is "college time table" management project, in this application teachers see their time table according to their class works. This application comprises of the daily schedule for every individual faculty and an alarm is set before 5min to intimate the individual.

Another application, mainly designed for entertainment purpose the "piano instrument" which can be viewed in mobile and resembles the same environment as piano gives.

The most interesting application "friendship percentage calculator" describes how strong their relation.

SNo	Roll No.	Name of the Student	Project Title
2	11A51A1245	K. Sowmya	Mobile Phone Based Attendance System

ABSTRACT

As mobiles are playing crucial role on each individual's life they became part of the life. Mobiles and their applications are now useful in many ways and they are making the survival easy for the men. This project tells about the collection of applications in the form of pool, this pool comprises of mobile attendance, mobile time table, and funny applications like updated piano, friendship calculator.

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Another application, mainly designed for entertainment purpose the "piano instrument" which can be viewed in mobile and resembles the same environment as piano gives.

SNo	Roll No.	Name of the Student	Project Title
3	11A51A1222	K.Kiranmayi	Host to Host congestion control in TCP

ABSTRACT

Most current Internet applications rely on the Transmission Control Protocol (TCP) to deliver data reliably across the network. Although it was not part of its initial design, the most essential element of TCP is congestion control; it defines TCP's performance characteristics. In this paper we present a survey of the congestion control proposals for TCP that preserve its fundamental host-to-host principle, meaning they do not rely on any kind of explicit signaling from the network.¹ The proposed algorithms introduce a wide variety of techniques that allow senders to detect loss events, congestion state, and route changes, as well as measure the loss rate, the RTT, the RTT variation, bottleneck buffer sizes, and congestion level with different levels of reliability and precision.

The key feature of TCP is its ability to provide a reliable, bi-directional, virtual channel between any two hosts on the Internet. Since the protocol works over the IP network, which provides only best-effort service for delivering packets across the network.

SNo	Roll No.	Name of the Student	Project Title
4	11A51A1237	Vijay Krishna	Ocean Color Data Merging

ABSTRACT

Atmospheric aerosols are tiny particles (solid/liquid) suspended in the gaseous medium, having wide size range(10⁻³ to 10²μm) with heterogeneous composition (sulphate, black carbon, organic carbon, sea salt, dust).Aerosol play an important role in the energy budget of earth atmosphere system. With the growing population, industrialization and urbanization the aerosol loading in India is increasing that have significant impact on the weather/climatic conditions. Satellite observations are naturally suited to the global coverage demanded by regional variation in aerosols. Moderate Resolution Imaging Spectro radio meter (MODIS) derived AOD is well suited for such study due to its revisit cycle of 1-2 days as a result a close estimate ofAOD is made for a given region throughout the year.

The present work analyzes the temporal and spatial variations and trends in aerosol load over Indian continent and associated oceanic regions (Arabian Sea and Bay of Bengal) using Terra-MODIS AOD550 data during the period 2001–2011. Indian continent is gridded into five different zones, coded as Indo Gangetic Plains (IGP), Indian Main Land (IML), Southern India1(SI-1), Southern India2(SI-2), Northeast India (NE). The AODs showed considerable variations across India during the above period.

Long term monthly average AOD values shows Maximum AOD in May for all the five regions except North East where maximum AOD occurs in March .Study revealed that in all regions there is a shift of frequency distribution of AOD from low AOD values to high during the study period. Monthly average AOD from 2001-2011 over megacities shows increasing trend for all cities except for Delhi .There it shows linear steady trend .An intense dust storm event occurred during March, 2012 has been studied using the MODIS derived AOD and Angstrom exponent in conjunction with NOAA HYSPLIT air masses back trajectories analysis.

SNo	Roll No.	Name of the Student	Project Title
5	11A51A1221	Uday Kiran	Engineering Student Handbook

ABSTRACT

Many innovative ideas are being incorporated in the mobile phones in order to make the device more and more consumer oriented. "Engineering Student Handbook" is a mobile based application developed using Android technology. The main objective of the application is giving a hope to the student who wants to check their marks. The user should install the app first in their android mobile and then add or update or modify marks. This application would help a student in calculating his/her individual mid or semester aggregate when they update their marks automatically. This application helps us in storing which helps us to remind the future task.

SNo	Roll No.	Name of the Student	Project Title
6	11A51A1230	P. Naimisha	DATA SECURITY USING HONEYPOT SYSTEM

ABSTRACT

Exploitation of newly discovered vulnerabilities often catches us by surprise. In order to overcome the loopholes of our system a compromised Honey pot acts as a rampart force. It offers a number of features that can assist with intelligence data gathering, incident response for a better understanding of who the attacker is and what method the attacker used to gain access.

We are implementing our project in Java, based on client and server technology. We also use cryptographic procedure for maintenance of security. The proposed model utilizes this idea for assigning permissions to an authenticated client. The back-end server will compare the requested operation with the client's permissions to determine whether the requested operation is allowed. If there is a difference in permissions and requested operations; it will give an early warning about an imminent attack.

If deployed correctly, a honey-pot can serve as an early warning and a security surveillance tool, minimizing the risks from attacks in a system.

SNo	Roll No.	Name of the Student	Project Title
7	11A51A1202	S. Anuradha	Online Gaming

ABSTRACT

Construct2 is a powerful ground breaking HTML5 game creator designed specifically for 2D games. It allows anyone to build games. Flash Action Script Programming , If user enjoy creating scripting interactive actions in Flash, then user ready to jump to the next level by learning programming with Action Script. Computers wherever you see ,you will find computers .Computers are very fascinating machines in this 21st century. We can use as information centre , PCs are for entertainment, business etc. So we want to develop web application regarding multimedia games, by that way all computer users can login and they can get entertainment by gaming provide by our game pool. Here we are going to designing a interactive game by using Construct2 technology as well as action script.

Construct2 allows us to create highly interactive and entertaining applications that can be modified. By learning Construct2 technology, we can start to build interactive games and other applications that are fully-featured.

SNo	Roll No.	Name of the Student	Project Title
8	12A51A1201	A.E.Sai	AITAM Transport Management System

ABSTRACT

AITAM Transport Management System is a web based application used to provide the details of our college transport services to the students as well as faculty up to date.

- ✚ In this application we provide complete updated transport details like bus fees, timings, availability of buses from different places with their bus numbers, different bus halts details.
- ✚ We are providing facility to track the status of bus route from source.
- ✚ This application creates an easy and effective interaction with the interactive user interface.

SNo	Roll No.	Name of the Student	Project Title
9	11A51A1235	T.Madhuri	SELF UPDATING DICTIONARY

ABSTRACT

- ✚ AITAM Transport Management System is a web based application used to provide the details of our college transport services to the students as well as faculty up to date.
- ✚ In this application we provide complete updated transport details like bus fees, timings, availability of buses from different places with their bus numbers, different bus halts details.
- ✚ We are providing facility to track the status of bus route from source.

✚ This application creates an easy and effective interaction with the interactive user interface.

SNo	Roll No.	Name of the Student	Project Title
10	11A51A1250	T. Swathi	SENSOR DATA NETWORK USING ANDROID MOBILE DEVICES.

ABSTRACT

In our project we present a system that deploys lightweight Sensor Networks easily based on widely available Android Devices.

This Android application is used to communicate with the on-board sensors of the mobile device, collate the variety of sensor readings to then be displayed on the device and sent to a central server for data logging and analysis.

To ensure data reliability and redundancy, back up logs are saved within the sensor devices and then later sent up the server or other live sensor device via SMS message.

FACULTY PUBLICATIONS

✚ A Novel Hierarchical Clustering Algorithm for Sensor Networks B. Kishor Kumar , G. Vijay Kumar

Abstract: Energy efficient routing protocol is very necessary in wireless sensor network due to the existence of resource constrained sensors. Clustering is an efficient approach for these problems in large scale networks. Hence, in this paper an energy efficient clustering algorithm is designed for sensor networks by considering the residual energy, cluster size and distance between the cluster head and a sink. NS2 simulator is used to evaluate the performance of the proposed algorithm. Simulation results reveal that the proposed algorithm outperforms the existing leach, leach-m algorithms for sensor networks.

✚ Cluster Based Secure Communication through Shamir Secret Sharing Technique A.B. Vasavi, Kavitha Kapala

Abstract: Secure transmission of data over cluster based wireless sensor networks is one of interesting research issues. In this paper we are proposing an efficient cluster based secure transmission technique in wireless sensor networks with authenticated Shamir key generation protocol with data confidentiality. In this approach we initially cluster the nodes based on coordinates of the node and we can choose any cluster for experimental implementation on nodes in cluster. Our experimental result shows more efficient results than traditional approaches.

✚ An Efficient Encrypted Digital Image Watermarking Scheme Kavitha Kapala, Jagadeeswararao G

Abstract: Increasing in networked multimedia systems has an immediate need for copyright protection and security of multimedia data that is transferred through the network. Digital watermarking technology provides solutions for protecting multimedia data from illegal manipulations. In the proposed method, embedding of watermark is done by using Discrete Wavelet Transform (DWT) - Singular Value Decomposition (SVD), and then a private key is used for the encryption of watermarked image. At the other end the watermarked image is decrypted first using the private key then the watermark is extracted by applying the reverse process of embedding. Using DWT-SVD, modification in all frequencies allows the development of a watermarking scheme that is robust to a wide range of attacks, and without having the private key any one cannot delete or modify the watermark.

✚ Computational Investigation for Secondary Structure Prediction M.Rithvik , G.Nageswara Rao

Abstract: Protein structure prediction play a key role in every living organisms All living organisms are made up of cells and each cell in its turn consists of certain protein consequences which exercise an important role in catalyzing the chemical reactions. So, a study of a protein structure becomes a search lamp in the diagnosis of a disease .when the percent identity between two protein sequences falls below 33%,it necessities to carry out the analysis of protein secondary structure. Of the several methodologies developed to analyze the protein secondary structure, two methods proved to be soundDSSP(Dictionary of Secondary Structure of Proteins) and GOR(Garnier,Osguthrope and Robson),Even though the prediction accuracy of GORV is 73.5% due to hazards in its implementation ,GORIV is generally used in spite of its accuracy being only to 64.4%.

✚ An Innovative Approach to Diabetes Diagnosis G.Nageswara Rao , V.Swetha , M.Rithvik

Abstract: According to the IDF report, diabetes kills one person every 6 seconds. The IDF estimates there are currently some 175 million cases of diabetes that have gone undiagnosed. The key objective behind the development of this project is to make people aware of diabetes. Diabetes is one of the deadly diseases that throw people to the condition of death .This project consists of mainly a program called “Diabetes Prevention Program”(DPP) where we classify people depending on the tests and the drugs available to them. By using this program many people are let to know about the symptoms of diabetes and its causes ,risks involved and the diagnostic criteria. This program was built by using the Archimedes Model ,LOWA algorithm and Glycemic Control Algorithm.

✚ Protection on Social Network Data Using Sensitive and NonSensitive Labels Prabhanjana Konni1 , Balaka Ramesh Naidu

Abstract: This Paper is motivated by the recognition of the need for a finer grain and more personalized privacy in data publication of social networks. We propose a privacy protection scheme that not only prevents the disclosure of identity of users but also the disclosure of selected features in users' profiles, Labels are denoted either as sensitive or as non-sensitive. We treat node labels both as background knowledge an adversary may possess, and as sensitive information that has to be protected. To maintain the trustworthiness, We gather the authorized information as proof. In this Social Networking site We maintain privacy and also traceability whenever he/she breaks the protocol.

✚ A Novel Approach to Network Security Situational Awareness Methods and Models Chintada Srinivasarao, J UdayKumar

Abstract: Network is a combination of nodes (a node may be a computer, a mobile, a sensor, and any other communicating devices) in an ordered manner in which they can communicate with each other. Security threats are very often in any kind of network due to many reasons, we developed a system which can detect these threats and provide us hassle free go. But even though by having security systems like intrusion detection system, Firewalls and security scanners etc are give raise to high false positive ratio due to many reasons with them just like malfunctioning of the device, Wrong Event judgment. Due to this network security situation becomes malicious and complete vulnerable and they may rise false to NSSA. We try to solve these kinds of problems by using Knowledge based Discovery to develop an enriched Framework [2],[9],[11],[12].

Editorial Board

Faculty

**G Jagadeeswara Rao
Dr.P Prasantham**

Students

- 1. A.Manal , II-IT**
- 2. P.Ramanamurty, III-IT**
- 3. P Naimeesha, IV-IT**



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