



Dr. N.G.P. ARTS AND SCIENCE COLLEGE

An Autonomous Institution, Approved by Government of Tamil Nadu
Affiliated to Bharathiar University, Coimbatore. Re-accredited by NAAC with 'A' Grade

Coimbatore - 641 048

News Letter 2017 - 18

Computer Informatics

Department of Computer Technology

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Editorial

It is our immense pleasure to bring out the newsletter for this academic year 2017 - 2018. This newsletter is one of the ways in which we can disseminate information on the life of the Department. The past academic year was full of various activities by the students and faculty in academic, co-curricular, extra-curricular as well as research & developments.

ABOUT US

The Department of Computer Technology was started in the academic year 2008-2009 with an intake of 50 students and 2 staff members. At present the total number of students is 340 and members of staff to faculty 12. Computer Technology is the study of Theoretical foundations of information, computation, their implementation and application in computer systems.



ASSOCIATION ACTIVITIES

CYBER DYNERZ, the association of our department organized various activities as a part of the academics which includes 4 Invited Talks, 1 Workshop, 2 Alumni Interaction Programmes, Interdepartmental Meet (TECHBEAT'2017), a Technical Expo (TECH EXPO'2017), National Level Technical Symposium (CYBERTRON '2018), 2 Extension activities and 1 Student Development Programme.

Guest Lectures

1. "A Quick Overview on Microsoft Windows Server 2016 Operating System" by K.V. Vaidhya Balaji, Sr. Technical Systems Analyst, Refinement Software Solutions, Coimbatore on 12.06.2017.
2. "Storage Virtualization" by Deepak Rajashankar, Consultant Hewlett Packard Enterprise Company, Bangalore, on 11.08.2017
3. "Data Science and Big Data", by Mr.N. Prasath, Senior Software Developer, Uniq Technologies Chennai, on 17.08.2017
4. "Recent Tools in Web Designing" by Mr.S. Sathis Kumar, Founder, Yellow Tree Academy, Coimbatore, on 03.01.2018.

Workshop

1. "Computer Installation and Servicing", by Mr.M. Kannan Assistant Professor, Department of Computer Technology, from 19.06.2017 to 30.06.2017

National Level Technical Symposium

1. "CYBERTRON'18" inaugurated by Dr. Santhosh Muthu member of BRICS youth policy committee, Ministry of Youth Affairs & Sports, Government of India

Inter Department Meet

1. Inter Department Competition TECHBEAT'17 and Intra Department Technical Expo TECH EXPO'17 has been conducted on 14.07.2017.

Student Development Program

1. A Student Development Program was conducted for the students of our department on 28.02.2018.

Alumni Interaction Programme

1. "Infrastructure and Services" by Mr.S. Surya Prasath, Assistant Software Engineer, TCS, Chennai, on 02.01.2018
2. "Future IT" by Mr. R. Rajiv, Software Automation Lead,

Wipro Technologies, Coimbatore, Mr.D. Arun Prasad, HR-Naukri, Coimbatore and Mr. Jagadeesh Team Lead, CTS, Coimbatore, on 06.01.2018

Extension Activity

1. "Drug Abuse Awareness Rally" on 29.06.2017 at VOC Park, Coimbatore.
2. "Yoga for Healthy Life" on 21.06.2017 at seminar hall 2 for our college students

Student Achievements

Around 60 Students from I year, II Year and III Year of the department participated in various technical and non - technical events in and around Dr. N.G.P. Arts and Science College, and won 6 SOLO CREDITS and 28 TEAM CREDITS.

Student Corner

E-Learning

E-learning theory describes the cognitive science principles of effective multimedia learning using electronic educational technology.

Benefits of e-learning for students

- Online Learning Accommodates Everyone's Needs
- Lectures Can Be Taken Any Number Of Times
- Offers Access To Updated Content
- Quick Delivery Of Lessons
- Scalability
- Consistency
- Reduced Costs
- Effectiveness
- Less Impact On Environment
- It results in improved scores on certifications, tests, or other types of evaluation.
- Higher number of students who achieve 'pass' or mastery' level.
- Enhanced ability to learn and implement the new processes or knowledge at the workplace.
- Help in retaining information for a longer time.

B. Mohan

IB.Sc CT-A

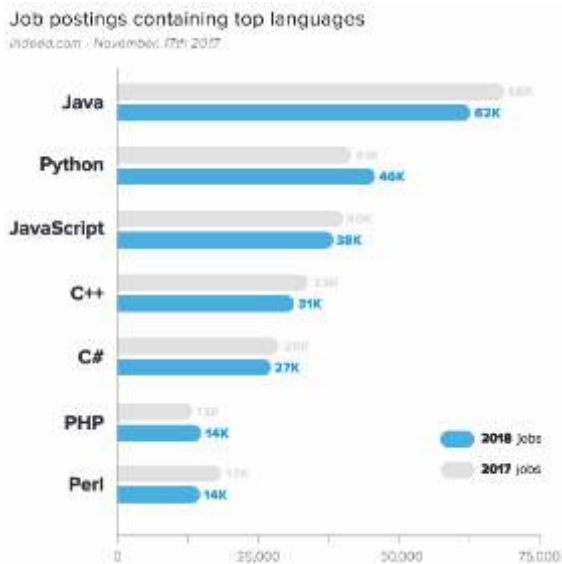


Top 7 Programming languages in 2018

The Perl Programming Language

Perl is a programming language developed by Larry Wall, especially designed for text processing. It stands for Practical Extraction and Report Language. It runs on a variety of platforms, such as Windows, Mac OS, and the various versions of UNIX.

Perl is a general-purpose programming language originally



developed for text manipulation and now used for a wide range of tasks including system administration, web development, network programming, GUI development, and more.

Features of Perl

- Perl takes the best features from other languages, such as C, awk, sed, sh, and BASIC, among others.
- Perl's database integration interface DBI supports third-party databases including Oracle, Sybase, Postgres, MySQL and others.
- Perl works with HTML, XML, and other mark-up languages.
- Perl supports Unicode.
- Perl is Y2K compliant.
- Perl supports both procedural and object-oriented programming.
- Perl interfaces with external C/C++ libraries through XS or SWIG.
- Perl is extensible. There are over 20,000 third party modules available from the Comprehensive Perl Archive Network
- The Perl interpreter can be embedded into other systems

RamyaaDevi

IB.Sc CT-A

Big Data Job Opportunities in 2017 And The Coming Years

According to Forbes, the top five industries hiring people with big data skills are the Professional, Scientific and Technical Services industry, the IT industry, the Manufacturing industry, the Finance industry, and the Retail industry. The graph below shows the



distribution of job openings in the above-mentioned sectors:

Forbes also reports that the demand for sales representatives that have the skills to sell big data solutions are going through the roof. They believe this trend will continue in 2017 and subsequent years. Big data professionals – Information Security Analysts, Management Analysts, and Information Security Analyst are also in very high demand.

BIG DATA JOBS

1. Data Engineer
2. Big Data Engineer
3. Machine Learning Scientist
4. Business Analytics Specialist
5. Data Visualization Developer
6. Business Intelligence (BI) Engineer
7. BI Solutions Architect
8. BI Specialist
9. Analytics Manager
10. Machine Learning Engineer
11. Statistician

S. Kishore

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Crossword puzzle Across

2. A key on the keyboard which moves left and erases whatever is to the left of it.
4. A named location on a page that can be the target of a hyperlink.
7. An error in an application program or a problem with hardware.
8. A program that contains the software instructions necessary to make exact replicas of itself and insert



these instructions into other executable programs.

9. The name of the first computer build in 1945
11. Those parts of the computer system that you can see and touch
13. Uniform Resource Locator
15. A feature that enables you to focus on a larger or smaller part of the worksheet in Print Review or in some pre-print features
16. Local Area Network
17. Random Access Memory

Down

1. Founded Facebook while he was a student at Harvard.
3. A peripheral device that provides a common way to communicate with the computer.
5. He is considered the Father of Computers
6. Co-Founder of Apple Computers
10. Blinking underline, rectangle, box, line or other symbol that marks you place on the screen. It shows you where your next action will take place. This is called an "insertion point".
12. A compact disk on which a large amount of digitized read-only data can be stored
14. File Transfer Protocol

Suresh

II B.Sc CT- B

Computer Virus and its types

A computer virus is a type of malicious software program ("malware") that, when executed, replicates itself by modifying other computer programs and inserting its own code. When this replication succeeds, the affected areas are then said to be "infected" with a computer virus.



TYPES OF VIRUS

1. Boot Sector Virus

This virus got attention when floppy disks were used to boot a computer. In modern computers, this virus could appear on the "Master Boot Record".

2. Web Scripting Virus

Since the trends of watching videos online have now become very popular – more than 2 Billion Videos are streamed on Facebook every day, these videos also execute a specific code. These codes can be exploited and it is very troublesome to note that this exploitation has taken place on some very notable sites. All the hackers have to do it to leave a comment in the Comments Section of the website which contains that code. Thus, even without the Webmaster knowing it, the code gets exerted into the site.

3. Browser Hijacker

While its visual effects might epitomize the threat, this hijacker is nothing more than a tactic to increase income from web ads.

4. Resident Virus

One of its more troublesome features is its ability to run away. Leaving behind the file which was originally infected, this virus has the ability to run on its own.

5. Direct Action Virus

Similar to the Vienna virus which shocked computers in 1998, this virus comes into action after you have executed the file. The load is delivered to your computer and the virus becomes active. However, this virus has a limitation. It takes no action unless the file which is infected gets implemented again.

6. Polymorphic Virus

One of the factors that epitomize the usefulness of this virus is its ability to evade. The Antivirus programs that are enabled on our computers detect the presence of any virus by detecting its code.

Polymorphic virus has exploited this limitation beautifully as it changes its code every time the infected file is executed. Thus, it becomes nearly impossible for any ordinary antivirus to track it down.

7. File Infector Virus

Although the word "file" in its name might suggest otherwise, this virus does not take the help of files every time. In fact, the file is only the starting point as the file infector dwarfs the first file after which it re-writes the file.

8. Multipartite Virus

Either they use one method or a single payload is delivered. However, this virus wants to claim both. Depending upon the operating system of your computer or the files that exist on your computer, it might use any of the two methods to spread.

9. Macro Virus

Appearing in the form of a word document which seemingly links the user to pornographic websites, Melissa is one of the most known Macro Virus. Going one step further, this virus not only exploits the user but also his/her friends by mailing the copies of

the infected virus document to the contact list.

Dhatshayani.

IB.Sc CT - B

RANSOMWARE

Ransomware is a type of malware program that infects locks or takes control of a system and demands ransom to undo it. Ransomware attacks and infects a computer with the intention of extorting money from its owner.

Ransomware may also be referred to as a crypto-virus, crypto-Trojan or crypto-worm.



Ransomware is typically installed in a system through a malicious email attachment, an infected software download and/or visiting a malicious website or link.

When the system is infected with ransomware, it is locked down, the user's files are encrypted, or the user is restricted from accessing the computer's key features. The ransomware will send pop-up windows asking the user to pay a specific ransom to reclaim or reactivate the computer.

Moreover, some ransomware-based applications also impersonate or disguise themselves as police or a government agency, claiming that the user's system is locked down for security reasons, and that a fine or fee is required to reactivate it.

Siddhartha.

IB.Sc CT - B

The Role of Artificial Intelligence in the Aviation Industry

The aviation industry, especially the commercial aviation sector, is constantly striving to improve both the way it works and its customer satisfaction. To that end, it has begun using artificial intelligence. Though AI in the aviation industry is still in the nascent stage, some progress has been made already as certain leading carriers invest in AI. To start with, certain use cases are being implemented such as facial recognition, baggage check-in, customer queries and answers, aircraft fuel optimization and factory operations optimization. But AI can potentially go far beyond the current use cases.

The Context

The global aviation industry has been growing exponentially. The aviation industry needs to move beyond its present ways of working and find better ways to optimize resources, improve



customer satisfaction and safety records, control costs and be more responsible environmentally. Data is key to unlocking the potential, and the aviation industry must leverage AI.

AI Use Cases in Aviation

AI in aviation is in the nascent stage, but some use cases are already being implemented by some major U.S. carriers. These use cases are

Passenger Identification

Baggage Screening

Customer Assistance

Challenges and Tasks

Since the aviation industry has only recently embarked on the AI journey, fully embracing AI is going to be a challenging task

Data Confidentiality Management

Tracking Progress

Managing Investments

Manigandan

II B.Sc CT - A

The Three A's for Smarter Security

Security can also be significantly improved using the "three A's": automation, analytics and artificial intelligence (AI). By taking on all of the routine tasks, automation helps free up security specialists' time to focus on preemptive measures and combat the most challenging intrusions.

At the same time, advanced behavioral analytics can reduce the time to detection (TTD) from months down to mere hours by creating profiles of what normal data activity looks like and triggering a warning should that activity deviate beyond a set parameter.

For some time now, cybercriminals have been using automated software to penetrate secure systems and subtly retrieve critical data - it's only right for the enterprise to adopt these same techniques for their own defense.

As for AI, imagine having an army of super-smart, all-seeing security experts on the job 24/7. Not only can such a system spontaneously circumvent the most leading-edge attacks, but it can continuously monitor a worldwide data store containing up-

to-date information on existing software threats as they mutate into ever more potent weapons.

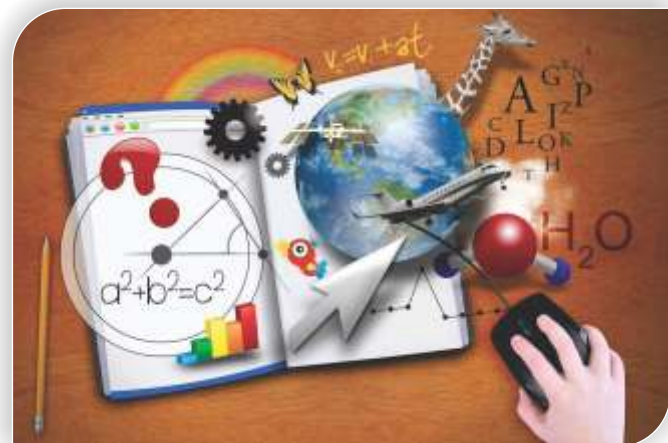
It should be noted, however, that emerging technologies are available to all, which means that the bad guys will be able to leverage all of these advancements for their own ends as well. But through the right combination of approaches, it is still highly conceivable that next-generation cybersecurity will not only make it much more difficult to obtain data, but that the value of that data will be greatly diminished by the time it falls into the wrong hands.

Padmakumar

II B.Sc CT- A

How Machine Learning Can Improve Teaching Excellence

Machine Learning can potentially redefine not only how education is delivered, but also foster quality learning on the students' part. Probably the most important part of the role of machine learning in teaching is customized teaching. With machine learning, we are moving away from the one-size-fits-all



methodology.

Machine learning promises to deliver custom in-class teaching by providing real-time feedback based on individual student behavior and other factors. This improves the chances of better learning. Machine learning also plays an important role in assessments or evaluations by removing biases.

The impact of machine learning in the field of teaching excellence is as follows:

Customized Teaching

Customized teaching is the direct opposite of the one-size-fits-all methodology or philosophy. Machine learning does the analytics based on individual student data, and makes the decision-making process automatic and uniform.

Better Assessments

Assessment is a major part of the teaching industry. Machine learning technology can help teachers assess or evaluate tests objectively and provide feedback. Machine learning applications

can do the assessment and provide scores. The process is taken care of by the machines, removing human intervention and helping to remove human prejudice or bias from the process.

Custom Lesson Plans

To date, lesson plans have been made in a generic way, so they are the same plan for all the students. However, students have different types of learning ability, so the same lesson plan may not be ideal for all students. Custom lesson plans can potentially result in better learning because the technology can assess student data and determine the best methods in which students can learn. It will also determine a better mapping of subjects based on student interest.

Custom Feedback

Feedback is an important part of any learning system. Machine learning analyzes the student data (grading, interest, score, behavior, etc.) and provides feedback. Machine learning also analyzes teachers' data (subject taught, method of teaching, acceptance, etc.) and prepares feedback. This feedback helps both parties.

Career Path Prediction

The career path of a student is very important for their future. If the path is not chosen with care, frustration and disappointment can be the result. Machine learning applications for career path prediction are able to track student interest, aptitudes and dislikes. It analyzes student behavior and reactions. Based on the analysis, it can fairly predict interest areas in which the student can excel.

Veerasudalai

III B.Sc CT- B

Common Computer Abbreviations

1. BIOS- Basic Input Output System
2. VGA - The Video Graphics Array
3. WYSIWYG - What You See Is What You Get.
4. HTML - HyperText Markup Language
5. HTTP - Hypertext Transfer Protocol
6. IP - Internet Protocol
7. ISP - The Internet Service Provider.
8. LAN - Local Area Network
9. PPP - Point-to-Point Protocol.
10. URL - Uniform Resource Locator
11. USB - Universal Serial Bus .
12. VR - Virtual Reality
13. VRML - Virtual Reality Mark-up Language

Yasodha

III.B.Sc CT-B

Emoticons

An emoticon is a way to overcome the fact that the person you are communicating with can neither hear your tone of voice nor see your facial expressions. They consist of a few key strokes that form a picture showing an emotion.

Some of the most common emoticons include

- :) or :-) - smiley face
- O:-) - angelic smile
- 8-) - big-eyed smile
- :-(- crying face
- :-> - grinning
- :-| - indifferent, bored
- :-)) - laughing
- =:-) - punk
- :-(- sad face
- :-D - shock or surprise
- B:-) - sunglasses on head

- :-|| - very angry
- 8-| - wide-eyed surprise
- :-) - winking
- :-O - yelling

J. Sowmiya

III B.Sc CT-A

At a glance

Guest Lectures/Workshop Conducted	:	05
Inter-department/Intercollegiate Meet	:	02
Extension Activity	:	02
Students Placed	:	54
Staff Publications	:	09
Student Achievements	:	34
University Rank	:	05

Photo Gallery



Alumni Interaction - 06.01.2018



Invited Talk on Storage Area Network - 11.08.2017



TECH EXPO'17 - 14.07.2017

Photo Gallery



Skill Development Programme - “
Computer Installation” - 19.06.2017



Technical Symposium “ CYBERTRON’18” - 01.02.2018



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