

NBA ACCREDITED BRANCH  
COMPUTER SCIENCE & ENGINEERING



# BYTEFLOW

JULY, 2023 EDITION

## Vision

To embrace students towards becoming computer professionals having problem solving skills, leadership qualities, foster research & innovative ideas inculcating moral values and social concerns.



## Mission

- To provide state of art facilities for high quality academic practices.
- To focus advancement of quality & impact of research for the betterment of society.
- To nurture extra-curricular skills and ethical values in students to meet the challenges of building a strong nation

## Program Educational Objectives (PEOs)

### PEO1

All the graduates will become high class software professionals who could be absorbed in the software industry on the basis of sound academic and technical knowledge gained by them on account of adopting state of the art academic practices.

### PEO2

All the graduates will demonstrate their talent in research and development activities involving themselves in such researches which could alleviate the existing problem of the society.

### PEO3

All the graduates shall be committed for high moral and ethical standards in solving the societal problems by means of their exposure to various co-curricular and extra-curricular activities.

# Program Outcomes (POs)

**PO 1 Engineering Knowledge:** Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of *complex engineering problems*.

**PO 2 Problem Analysis:** Identify, formulate, review research literature, and analyze *complex engineering problems* reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.

**PO 3 Design/development of solutions:** Design solutions for *complex engineering problems* and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations

**PO 4 Conduct investigations of complex problems:** Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.

**PO 5 Modern tool usage:** Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modeling to *complex engineering* activities with an understanding of the limitations.

**PO 6 The engineer and society:** Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.

**PO 7 Environment and sustainability:** Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.

**PO 8 Ethics:** Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice .

**PO 9 Individual and team work:** Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings

**PO 10 Communication:** Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.

**PO 11 Project management and finance:** Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.

**PO 12 Life-long learning:** Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.

# Program Specific Outcomes (PSOs)

## **PSO1**

Professional Skills: Attain the ability to design and develop hardware and software based systems, evaluate and recognize potential risks and provide creative solutions.

## **PSO2**

Successful Career and Entrepreneurship: Gain knowledge in diverse areas of IT and experience an environment conducive in cultivating skills for successful career, entrepreneurship and higher studies.

## **PSO3**

Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.



### **HOD'S Message**

Congratulations to the students and faculty associated to magazine committee for successfully publishing the July Edition of departmental technical magazine. Byteflow is creating platform which provides an opportunity to the students and staff to express their original thoughts on technical topics.

The magazine plays an instrumental role in providing exposure to the students to develop written communication skills and command over the language. It is a step towards building professional and ethical attitude in them. The entire journey of creating Byteflow is an outcome of rigorous effort made by students and faculty. Students not only gain the knowledge about the latest technological developments and advancements through reading and writing articles but they also develop verbal and written communication skills.

This magazine has expanded its scope by introducing articles by major stakeholders. Apart from students and faculty, inputs have been collected from alumni & industry experts.

On concluding note, I would like to thank all the Faculty for their involvement and wishing all the best for their bright future.

**Mr. Alok Mishra**  
**HOD(CSE)**



### **Editor-Incharge Message**

This is the July Edition of the CSE department magazine. As the leader of the CSE department magazine, ByteFlow, this magazine is particularly special to me as it was a challenge to not only live up to the standards set by the previous magazine but also set new ones. ByteFlow is all about the technology that inspires students to do something, that leaves an everlasting mark on the world of technology. Thus it was our job to ensure inspiring technological developments are being brought to the students of AIMT, by the students of CSE itself.

Since the team was experienced, having worked on the previous magazines, they knew exactly what had to be done and how it had to be done. I think we were lucky that we retained all members from the team behind the earlier magazines. Everything from collection of articles right down to the final edits was more or less smooth sailing. I worked closely with the team to ensure everything was done according to a schedule. The work was performed in an organised, almost professional manner and credits to my entire ByteFlow team, for their commendable job.

I would also like to thank every member of the ByteFlow team, without whose contribution, this magazine would not have been possible. I hope you enjoy reading this magazine as much as I enjoyed working towards its creation and more importantly I hope that the articles in this magazine inspire you.

**Mr. Vipin Rawat**  
**Editor In-Charge**



### **Editorial**

At the outset, on behalf of the entire Computer Engineering department and all the readers I extend my whole hearted gratitude to the Executive Director Mr. AMBIKA MISHRA, to our worthy Dean, Dr. R. S. MISHRA, and also to our HOD CSE Mr. ALOK MISHRA for their dynamic, inspirational, enthusiastic contribution and motivation towards our department also boosting our confidence for the consecutive publishing of July Edition of the Magazine ByteFlow. This technical magazine named 'BYTEFLOW' signifies an emanation of knowledge. Team 'BYTEFLOW' will always remain indebted for the immense support and interest shown by you all.

Computer Science and Engineering is an ever-expanding field and the power what technology holds today is definitely beyond one's imagination rendering splendid set of ideas and therefore, the current magazine in your hands is the July edition of the magazine themed as 'Idea is a dawn. Dawn is an Inception'. This edition is full of exciting new technologies; we have also included certain articles from the industries. We have also covered important events and programs organized by the department of Computer Science Engineering in Ambalika Institute of Management & Technology (AIMT). Our endeavour with each edition is to update you on the latest trends of technologies coming up and flashing some light on the innovative minds of the youth today. Lastly, quoting my special thanks to Vipin Rawat Sir for his support and guidance all along, the departmental faculty members and also to all my team members without whom this magazine wouldn't have been possible. We hope all the readers will enjoy this magazine as much as we enjoyed creating it.

**Ms Divya**  
**Editor Team**  
**Co-ordinator**

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# Biometrics: Future Scope

It is possible to confirm or establish an individual's identity based on “who she is”, rather than by “what she possesses” (e.g., an ID card, key) or “what she remembers” (e.g., a password, pin). Biometrics are automated methods of recognizing a person's identity based on a physiological (face, fingerprints, hand geometry, iris, retinal, vein, DNA, ear print) or behavioral (handwriting, voice, keystroke) characteristic.

The need for biometrics can be found in government, military, and commercial applications example: workstations, network and domain access, single sign-on, application login, data protection, remote access to resources, transaction security and web security.

Biometric recognition can be done via verification/authentication (one-one) or identification (one-many).

The authentication process involves:

Sensing

- Feature Extraction
- Pattern Matching
- Decision Making

Biometric traits are subject to:

- Noise in sensed data
- Intraclass variation
- Interclass similarity
- Non universality
- Spoof attacks

The above limitations can be overcome by using Multimodal Biometrics. Following fusion scenarios may be presented:

- Single biometric trait, multiple sensors (2D and 3D image of face)
- Single biometric trait, multiple classifiers (combine PCA, LDA, ICA for face or texture based for fingerprint)
- Single biometric trait, multiple units (combine 2 or more fingers of single user or both irises)
- Multiple biometric traits (face, voice or face, fingerprint)

A particular biometric must possess following characteristics:

- Universality (every individual must possess the biometric)
- Distinctiveness (unique to each individual)
- Permanence (invariant with time)
- Collectability (measurable)
- Acceptability
- Resistance to circumvention.

However, a human characteristic that possesses all these properties has not yet been identified. As a result, none of the existing unimodal biometric systems provides perfect recognition and there is a scope for improving the performance of these systems.

Characteristics like skin color, eye color, hair color, presence of beard, presence of moustache, height, weight, gait, keystroke, clothes color, tattoos, accessories, gender, ethnicity, age, height, weight and eye color though not unique and reliable, provide some information about the user. These characteristics are referred as “soft” biometric traits and can complement the identity information provided by the primary biometric identifiers. These are easier to capture from a distance and do not require cooperation from the subjects.

Although biometrics is a powerful tool against repudiation and has been widely deployed in various security systems, biometric characteristics are largely immutable, resulting in permanent biometric compromise when a template is stolen. Thus, there is the need to improve public confidence and acceptance of biometrics.

This privacy concern can be overcome by following emerging technologies:

Cancelable biometrics consists of intentional, repeatable distortions of biometric signals based on non-invertible transforms or biometric salting which provide a comparison of biometric templates in the transformed domain. If a cancelable feature is compromised, the distortion characteristics are changed, and the same biometrics is mapped to a new template, which is used subsequently. The application of transforms provides irreversibility and unlinkability of biometric templates, which prevents the use of same captured template for other applications.

Biometric cryptosystems are designed to securely bind a digital key to a biometric or generate a digital key from a biometric to benefit from the strengths of both fields.

**For example:** Bio-Hash. It requires storage of biometric-dependent public information, which is applied to retrieve or generate keys, also referred to as helper data. There are further challenges involved in biometric key generation primarily due to drastic acquisition variations in the representation of a biometric identifier and the imperfect nature of biometric feature extraction and matching algorithms.

Mr. Satish Kumar Singh

Assistant professor

# Programming language dictionary

A- Arithmetic language developed by Grace Hopper in 1951.

B – Bell labs is a programming language developed at Bell labs circa 1969.

C- General purpose computer programming language developed by Dennis Ritchie in 1969.

D - Object-oriented multi-paradigm system programming language.

E - Object-oriented programming language for secure distributed computing, developed by Mark S Miller, Dan Bornstein, in 1997.

F- Module-oriented, compiled and numeric computer programming developed for scientific programming and scientific computation.

G-Numerical Control(NC)programming language. It is used mainly in computer-aided manufacturing for controlling automated machine tools.

H- Hack is a programming language for the Hip Hop Virtual Machine(HHVM), created by Facebook as a dialect of PHP.

I- Interactive Data Language (IDL), is a programming language used for data analysis. It is popular in particular areas of science, such as astronomy, atmospheric and medical imaging.

J-Java is a general-purpose computer programming language that is concurrent, class-based, object-oriented, platform independent language.

K-Is a proprietary array processing language developed by Arthur Whitney and commercialized by Kx Systems.

L- Larry McAvoy, with extensive help from Jeffrey Hobbs, Oscar Bonilla.

M-MATLAB (matrix laboratory) is a multi-paradigm numerical computing environment and 4th generation programming language.

N– Net Logo is an agent-based programming language designed for logo programming.

**O-** Oak is a programming language created by James Gosling in 1991 Sun Microsystems set-topbox project.

**P-** Perl (Practical Extraction and Reporting Language ) is a family of high-level, general-purpose, interpreted, dynamic programming language.

**Q-** Proprietary array processing language developed by Arthur Whitney and commercialized by Kx systems .

**R-** Programming language and software environment for statistical computing and graphics.

**S-** Is a statistical programming language developed primarily by John Chambers Rick Becker and Allan Wilks of Bell laboratories.

**T-** Programming language is a dialect of the Scheme programming language developed in the early 1980s by Jonathan A. Rees, Kent M. Pitman, and Norman I.

**U-** Ubercode is a high level programming language developed by Ubercode Software and in 2005 for Microsoft Windows.

**V-** VHDL (VHSIC Hardware Description Language) is a hardware description language used in electronic design automation to describe digital and mixed-signals systems.

**W-** WATFIV developed at the University of Waterloo is an implementation of the FORTRAN programming language.

**X-** XBL (XML Binding Language) is an XML-based mark-up language used to declare the behaviour and look of XUL-widgets and XML elements.

**Y-** Yahoo Query Language (YQL) is an SQL like query language created by Yahoo as part of their Developer Network . YQL is designed to retrieve and manipulate data from single Web interface

**Z-** Z notation is a formal specification language used for describing and modelling computing systems.

# 7 surprising facts about Google

Here's a fact that everyone owning a piece of technology is aware of: Google is your number one search engine. Not only is it a portal to access everything you'd like to know, but it also acts as an amazing backup when your parents come to check up on you (don't give me that look, we know that whenever you notice anyone else looking at the screen over your shoulder, you change tabs to Google.com and just stare at it until they leave). However, here are some, rather interesting facts about Google that you may not know.

## FACT 01:

When you perform a Google search, the machine checks the Google index to determine the relevant search results to be displayed to you. This search engine considers 200 factors before displaying you the best results for your query. Google uses a special algorithm called the Googlebot to generate search results.

Sometimes, the results are rather surprising.



## FACT 02:

Google owns a cluster of domains such as, Google.com, Gogle.com and Googlr.com which directs to Google.com, which is completely reasonable. However, Google also owns 466453.com. If you take a look at your telephone keypad, you will notice that the numbers match up to the letters as so: 4 - GHI, 6 - MNO, 6 - MNO, 4 - GHI, 5 - JKL, 3 - DEF, thus making 466453 as Google. So, if on typing any of these knowingly or unknowingly, it doesn't take you to some strange page. Instead, you'll land up on Google.com only.

## FACT 03:

When Google was founded in September 1998, it served ten thousand search queries per day. Currently, there are more than 2 million Google searches per second. The search engine finds a trillion unique URL's on the web. Crawls many billion sites a day and processes numerous searches every month.

## **FACT 04:**

Google takes on the best projects that could change the world for millions of people. In 2012, Google introduced the Cherokee language in Gmail, which is the first Native American Tribal language added to its list. As part of this effort, Google also added Cherokee to its recently launched virtual keyboards for Gmail.

## **FACT 05:**

On August 30, 1998 the concept of the Google Doodle was formed when company co-founders Larry Page and Sergey Brin placed a simple stick-figure drawing behind the second “o” in the word “Google”. To notify the Google users that the founders were “out of office” at the Burning Man festival in the Nevada desert they made the first Google logo art.

## **FACT 06:**

Google's search index is so huge (100 million gigabytes) in size that it would require about 100,000 one-terabyte personal drives to store the same amount of data.

## **FACT 07:**

The only company with a clear goal to reduce the amount of time people spend on its site might be Google. Google engineers are encouraged to spend about 20 percent of their work time on projects that interest them using a policy often called as Innovation Time Off.

Mr Shivam Srivastava  
Assistant Professor

## Strive for “The Best”

Everyone aspires for something different. Be it a specific job title, a big dream to chase, a particular spouse. Nothing wrong about it, especially considering needs of any single person does not remain static over their lifetime, but evolve to match their circumstances at the time. Obvious, isn't it? Yet, some of our strives seem, well, unnatural at best. What do I mean?

If you imagine a tree, its history, the legend behind it, what do you see? It starts with a single stalk, then first leaf, then trunk manifests itself, then you get branches, with more and more leaves and even more branches. Environmental reality can and will affect the process. Winds will blow, shaping the tree in an awkwardly aerodynamic shape, allowing it to grow more easily. Every now and then, a fire will sweep the area – hopefully the tree will be big enough to sustain it. Mistletoe will prey on it, as will several insects, birds and other beings. What will the tree do about it?

Keep on growing. I've never heard of a tree – or any other living organism – to voluntarily stop growing. To decide 'it's big enough'.

Yes, we're this very special species. We voluntarily give up our chances to achieve something more, to become someone better, to positively and actively affect our reality.

And we do have plenty of excuses, most of them easily distinguishable by the word 'anyway'. “I couldn't have pulled it off anyway”. “They would get there first anyway”. “He would've declined me anyway”. With all my good-heartedness, the only description of all these excuses I can give is lame. No excuse is good enough to settle for the next best thing.

“

### But what if I fail?”

Oh, sure, you will, several times to be honest. In fact, it doesn't really matter. You fail, you draw conclusions, you evolve, you keep calm, you carry on. That's it. This is how the greatest inventions are made. This is how people become genuinely happy in their life. This is how they die fulfilled, not grumbling, like the rest of us.

What does it take to get there? It's actually easier than you think. If we were to be all managerial and play with SMART (Specific, Measurable, Achievable, Realistic, Timeboxed) goals, you could either magnify the goal tenfold, or decrease the time box ten times. Then figure out, what would be necessary to get there. And, while you might be worried it wouldn't get you anywhere, you'd actually be wrong. Let me give you an example.

Imagine I asked you to walk 3 kilometers (2 miles) in an hour. It's easy, for any healthy adult. If I ask you to do the same in 10 percent less time (54 minutes), it would've changed nothing. You'd just walk a bit faster. Move within the processes you already know, yet improve them slightly. Now, if I ask you to get reach the same distance in one-tenth of a time (6 minutes), that's an entirely different story. Merely doing the same thing – walking – yet 10 times faster, is not an option. It's actually physically impossible. What would you do then? If you're really fit, it is possible to do it on a bicycle. It's, obviously, easily achievable using any available car. It's nothing of a challenge if you can ride a motorbike.

Can you see what happened here? By simply taking on an extremely ambitious - impossible to achieve using your regular mode of operation – goal, you've forced yourself to think outside the box. You've actually opened the window of opportunities.

It's the same with every single thing in our life. Thinking of a dream job, far beyond your seemingly achievable postings? Just file your resume. Worst case scenario, nothing will happen. Odds are, you'll receive some feedback – like “you do not have enough experience in the areas of A, B and C”. Fantastic, now you know what to do to get there. I got to work with industry-best this way. Attempt, rejection, feedback, conclusion, improvement, another attempt leads to success. That's how it works. They say persistence is the key to success – and it might actually be. Why only 'might'? Because if you don't know how superstars think, you're likely to be amazingly persistent doing the wrong thing, the wrong way.

It's not only about career. See that fancy Porsche parked there? Is it something you'd really like, yet can't afford? Well, how do you know you can't? Do you know how much the car actually costs, what are the monthly payments and so on? If not, then why would you limit yourself artificially?

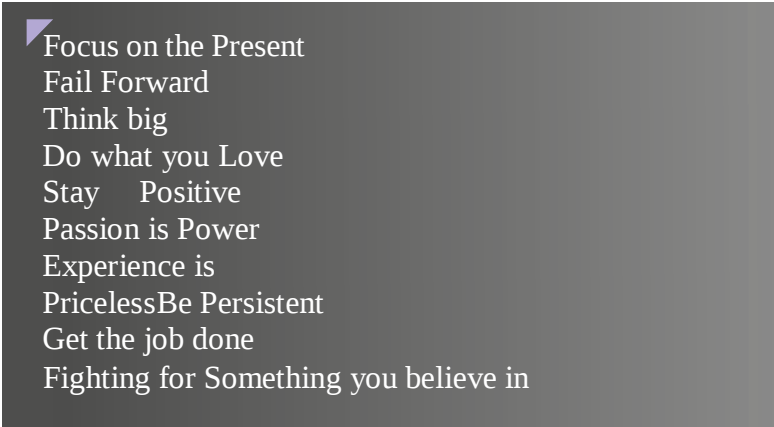
See that someone over there, the popular one, which you'd dream would live with you 'happily ever after'? Why wouldn't you just come over and try? Sure, you can get rejected – but then you know what might not work on this kind of person. Lesson learnt.

Then, how about providing something new for the mankind, like shedding some light into their lives? You try it once, twice, thrice, fail, fail, fail. On one hand, it doesn't really look promising. On the other hand, you've just learned three ways how doing it wrong. Several hundred failures later, you've made it. Congratulations, Mr. Edison!

It is unnatural for any being to limit itself voluntarily. This is not how we change ourselves, how we change our reality, how we change the world. Whatever you do, aspire for the best. If you fail, learn from it, modify your approach, then do it again.

Blind persistence is a fantastic pathway to the exceptional mediocrity. Persistence in adapting and striving to achieve the best can put you in the stars.

A small mantra of success by Donald Trump:



- Focus on the Present
- Fail Forward
- Think big
- Do what you Love
- Stay Positive
- Passion is Power
- Experience is
- Priceless Be Persistent
- Get the job done
- Fighting for Something you believe in

# E-mail writing

An e-mail message is mainly divided into two sections, the header and the body. The header contains the recipients' addresses, while the body comprises the main message that is read by the recipients. A domain name is an address in the textual format that uniquely identifies a website on the Internet. For example, consider the domain name `www.yahoo.com`. Here, `.com` is identified as the top-level domain. As the name specifies, the top-level domain represents the objectives of the website and categorizes the websites.

The following table describes some top-level domain names, their description, and some examples.

| TLD  | Description                                  | Examples                           |
|------|----------------------------------------------|------------------------------------|
| .com | Commercial organizations and websites        | google.com, amazon.com, ebay.com   |
| .org | Non-profit organizations                     | wikipedia.org, redcross.org        |
| .net | Network-related organizations and businesses | microsoft.net, verizon.net         |
| .gov | U.S. government agencies                     | usa.gov, fbi.gov, nasa.gov         |
| .edu | Educational institutions                     | harvard.edu, mit.edu, stanford.edu |

|         |                                          |                            |
|---------|------------------------------------------|----------------------------|
| .mil    | U.S. military                            | army.mil, navy.mil, af.mil |
| .int    | International organizations and treaties | europa.eu, oas.int         |
| .co.uk  | United Kingdom commercial entities       | bbc.co.uk, amazon.co.uk    |
| .gov.uk | United Kingdom government agencies       | parliament.uk, mod.gov.uk  |
| .ac.uk  | United Kingdom academic institutions     | cam.ac.uk, oxford.ac.uk    |
|         |                                          |                            |

### **The header of e-mail contains the following fields:**

**To:** You need to write the recipient/recipients' e-mail address in this field. The e-mail addresses mentioned in this field are the primary recipient's. For example, natasha@yahoo.com.

**Cc:** It stands for carbon copy. In this field, you include thee-mail addresses of those persons who are not the primary recipients. However, you want to keep such recipients informed about this communication.

**Bcc:** It stands for blind carbon copy. In this field, you include e-mail addresses of those people who are not the primary recipients. However, you do not want the primary recipient to know that you have e-mailed the same message to other recipient.

**Subject:** Includes the subject of the e-mail where you specify the synopsis of the entire e-mail.

### **The body of e-mail can be divided into:**

**Opening:** The opening of the e-mail is its introduction paragraph. In this paragraph, you acknowledge the recipient, introduce yourself or open a chain of communication.

For example, Respected Sir/Madam, Hi All, Dear Friend.

**Detailing:** The detailing is the actual content or body of thee-mail that consists\ of the main paragraph/ paragraphs where you express your ideas or messages.

**Closing:** The closing includes the conclusion or the summary of the e-mail. The concluding paragraph where you thank the recipient, add hyperlinks (if required), set time frames for the next communication, and conclude by sign off.

### **Guidelines for E-mail Writing**

To ensure clarity in your business e-mails, adhere to the following guidelines:

**Use an appropriate subject line:** The recipient gets the first impression of your e-mail from the subject line. Often, recipients prioritize reading an e-mail by reading its subject line.

**Should not be blank:** The subject line of the e-mail should not be blank. At times, the recipient might delete the file, if the subject is missing. Moreover, the subject line makes the recipient think about the message.

**Should be self explanatory:** Recipients get confused when they receive e-mail with ambiguous subject line. For example: Important, please read. It does not mention why

it is important. The subject line should be like an informative headline. It should summarize the entire content of the e-mail.

Can be in form of a question: When you are writing an e-mail to receive an answer of a question quickly, you can just write the question in the subject line. However, this is applicable only when you know your recipient well such as between colleagues and friends. For example, "At what time we are going to meet?"

Use an appropriate greeting: Begin your e-mail with a greeting such as Dear Natasha, Hi Bella, or Dear Sir/Madam.

Keep the message short and simple: E-mails should be short, maximum 4-5 paragraphs. It should be clear and concise. If you write unnecessarily long e-mails then you are wasting the recipient's time. In case, you want to write more, write it in a document and send it as an attachment.

Quote accurate data/facts: Ensure that you send the correct message. For example, you are sending e-mails to inform the growth percentage of the company and you make mistakes in the percentage. Therefore, the recipient gets the incorrect information.

Use business English: Use formal language and use standard spelling, punctuation, and capitalization.

Use standard font and colour: Use fonts that are easily readable. Choose colour carefully. It should not create any distraction in recipient's eye.

Proofread and check spellings before sending the e-mail: Proofread the e-mail to ensure that it contains the accurate message and is error free. For example, you are informing your colleagues the meeting time. The meeting time is 5 pm and you mention 6 pm in the e-mails.

# How to crack campus Placement Interviews

Most of the placements processes that take place on-campus follow the following steps:

Aptitude Test  
Technical  
Interview  
HR Interview

Given below are some of the tips that can help you crack these interviews and get placed through campus placements:

Most of the aptitude tests consist of basic school level maths, logical and verbal questions. You can practice these questions through various online websites such as [indiabix.com](http://indiabix.com) or from books such as the RS Agarwal book. You might not need much practice if you were good at maths in school.

1. Prepare well in advance for the technical interview. The panel might ask you any questions from any of the subjects that you have studied since first year. Also make sure you know the syllabus of the subjects that you have in your current semester. Preparing for interviews/placements is no excuse to neglect your college studies.

2. During the interview, be calm. The company is here because they want to hire you as much as you want to be hired. When asked a question it's alright to pause and take a moment to collect your ideas.

3. In the HR interview, the panel will ask you basic questions about your strengths and weaknesses, your background, why they should hire you etc. You should prepare such questions in advance. It's not a good sign if the panel asks about your strengths and you sit and wonder what those are while in front of them. The candidate should have evaluated themselves before anyone else can.

I hope this helps you in getting the basic idea of how to go about preparing for campus placements. I wish you the best.

# Time – Management

Change your Time Management Philosophy Now! Streamline your Time.

Time is the most valuable resource and needs to be managed properly to utilize its full benefits. It has been quoted that Time travels like an arrow, but according to me in this century I would slightly twist the quote and conclude that “Time travels faster than light”. We complain that we run short of time, even though we have full 24hrs in a day. This is due to lack of proper time management. Poor time management prevents you from completing your work on time, thereby causing you a lot of stress. By managing time properly, you can organize your work systematically and relieve yourself of stress caused by the overload of unfinished work. Most people consider time management as the simple concept of maintaining a diary and planning activities. However, besides maintaining a diary and planning activities, effective time management also helps you to schedule and prioritize your activities.

Time management helps you in several ways.

For example, it helps you to:

- Plan each day efficiently.
- Reduce stress.
- Set and work towards achieving long-term goals.
- Get rid of activities which waste time.
- Reduce time pressures.
- Find time for creative thinking.
- Find time to relax and enjoy life.

There are several techniques that you can use to manage time effectively. Some basic techniques for time management are:

Avoid procrastination: Procrastination is the habit of putting things

-

off for a later date. As a result, work piles up so high that any amount of effort does not seem to be enough to get it finished. To avoid this problem, resolve not to postpone what can be done today.

**Delegate work appropriately:** Delegation means transferring the initiative and authority to another person for performing a task. Delegation saves your time and helps in developing the skills of subordinates. Do not do the tasks that your subordinates are supposed to do. Delegate as much as you can so that you can use your time for doing tasks that require a higher skill level.

**Learn to say “No”:** People often make the mistake of saying 'yes' to everything they are asked to do without actually analyzing whether they have time to do it. You might find it difficult to refuse somebody's request for your time. However, you need to learn to decline their request politely, but firmly. Effectiveness at work depends on knowing what not to do. Over-commitment can cause you a lot of stress and can be harmful for your health. However, saying “no” might not be possible all the time. In such a case, you might try saying “I have other commitments...” or “I am sorry, even if I want to, I would not be able to squeeze it in my already tight schedule”.

**Set up a routine:** People usually like to do things when and how they feel like doing them. Although, this gives them a lot of freedom, it wastes a lot of time and energy. To avoid this problem, set a routine for doing certain things at a certain time daily and in defined time duration. Then stick to that routine everyday.

**Divide large tasks:** Large tasks should be broken into a series of small tasks. By creating small manageable tasks, the large task looks more achievable, thus reducing mental stress due to the enormity of the task. Also, it is easier to delegate smaller independent tasks to your team so that your workload is reduced and the work gets done.

**Define goals:** It is difficult to manage your time effectively if you are not clear about your goals.

### ***Time Stealers***

For effective time management, you need to know which

aspects of your personal management need improvement. Sometimes you agree to take on things which have no benefit to you in the long run. You do it only to help a friend in need or at times to avoid monotony of work, or maybe just because you think you will be able to pull it off without wasting time. However, each and every distraction from your schedule, costs you time and time stealers squeeze out time from your important scheduled projects, leaving you with lesser time and more work. This, in turn, can make you overworked and stressed. Some common time stealers are:

**Personal e-mail:** Do not use valuable work time to send and receive personal joke-sharing or other distracting e-mails. Sending and receiving personal e-mail messages during office hours exhibits poor work ethics and causes a lot of distraction from your scheduled work. Plan to check your e-mail two or three times a day only. Allot time in your schedule for answering important email messages. Use a good spam filter to avoid junk mail and delete unnecessary emails to keep your inbox light. Archive project-related e-mails under the name of the project. This will help you find an important e-mail when required.

**Telephone calls:** Long telephone calls are a big wastage of time. Do not make or receive unofficial telephone calls during office hours. Use voice mail message to let people know

you will return their call at a particular time during the day.

Let people who answer the phone for you know that you cannot be interrupted during a defined working hours. Return the call if it is important. Promotional or sales calls need not be returned.

Peers and colleagues wanting some files or report: Help your peers and colleagues understand that you are involved in a high priority project and are pressed for time. Give them a time at which they can get their questions and issues answered. In case the files required are urgent and serve as dependencies for the completion of another project, you must help. Set firm boundaries when people come to chat with no clear business purpose.

Internet browsing: Be careful about being drawn in by the Internet. Doing some research on the Internet can lead to distractions such as online shopping or browsing through interesting sites that are unrelated to your current project.

The Internet can be a huge distraction, while at the same time a necessity. Learn to draw a line between the two. Set an alarm to remind you to get back to your project work. You can also devise pop-ups on your computer to remind you about slipping timelines periodically.

Other projects: Sometimes when you are working on one project, you suddenly remember an important task or a new idea related to another project. In such a case, do not jump to the other project the moment you remember the task or get the idea. Instead, make a note of the activity/idea and plan to do it at some other time. Getting up to work on the other project can be a way of procrastinating.

### Assigning Priorities to Activities

A priority consists of two elements, urgency and importance. To prioritize the activities on the basis of urgency and importance, you can use the time management grid. The time management grid is a simple diagramming. The time management grid contains four quadrants:

| Importance |                                         |                                          |
|------------|-----------------------------------------|------------------------------------------|
| Urgency    | Quadrant 1:<br>Important and Urgent     | Quadrant 2:<br>Important but not Urgent  |
|            | Quadrant 3:<br>Not Important but Urgent | Quadrant 4:<br>Not Important, Not Urgent |

technique that helps you choose which activities to prioritize and which to drop to make the most of your time and opportunities. All the activities in your to-do list can be listed in one of the quadrants in the time management grid.

**Quadrant 1:** This quadrant contains activities that are both important and urgent. It represents a fire fighting situation because it contains activities that need to be dealt with urgently.

**Quadrant 2:** This quadrant contains activities that are important but not urgent. It represents quality time. Although the activities here are important, and contribute to achieving the goals and priorities, they do not have to be done right now. As a result, they can be scheduled when you can give quality thought to them.

A good example would be the preparation of an important talk, or mentoring a key individual. Prayer time, family time, and personal relaxation/recreation are also part of Quadrant 2.

**Quadrant 3:** This quadrant contains activities that are not important but are urgent. It represents distractions because it contains activities that must be dealt with immediately, despite being unimportant. For example, when you answer an unwanted phone call, you have to interrupt whatever you were doing to answer it.

**Quadrant 4:** This quadrant contains activities that are neither important nor urgent. It represents time wasters because the activities in this quadrant can be completely avoided and the time spent on these activities can be utilized for doing some productive work. At times, meetings can also fall into this category if they do not achieve anything or you do not contribute to them. Time is your friend, treat it with care and avoid stress.

Thus, concluding this, I hereby state that time management is the art of utilizing the available time in a productive and efficient manner. The best way to create time is to cut down on unproductive activities and tasks that do not contribute towards our goals in life. Maintaining an organized workplace helps in reducing the wastage of time. Procrastination leads to stress in the long term, therefore, it is better to make the effort

without wasting time. Set goals with specific timelines. Create activity log and to-do lists. Create an action plan to manage time by incorporating goals, schedules, priorities and delegation. Last but not the least, reduce stress, enjoy the time, work precise and act wise!



# Payment without Cash

Imagine shopping without cash, it seems to be contradictory, but now not only you can think about it, but also experience it. "UNIFIED PAYMENT INFRASTRUCTURE". In this concept firstly along with the basic details provide your mobile no. and aadhar card no. to the bank in which you have an account. Now an application will be developed which will have the tie-up with the bank. The app needs to be installed in the mobile of the cashier of the place you have visited, and in your mobile too. Now, while billing, cashier will add all the products purchased, total it and then ask for your phone no. that you have registered in the bank. After entering the no., that whole bill will be sent to the mobile phone whose no. was entered and the customer can now check the bill, verify the amount and press 'OK' twice (reconfirmation) for the final payment.

## ***VERIFICATION OF PRODUCT LIST BY CUSTOMER***

While receiving the message, the location of the shop, mall, etc. will be reflected on the receiver's end for the identification. After receiving the bill the customer will press "OK" for the payment transaction.

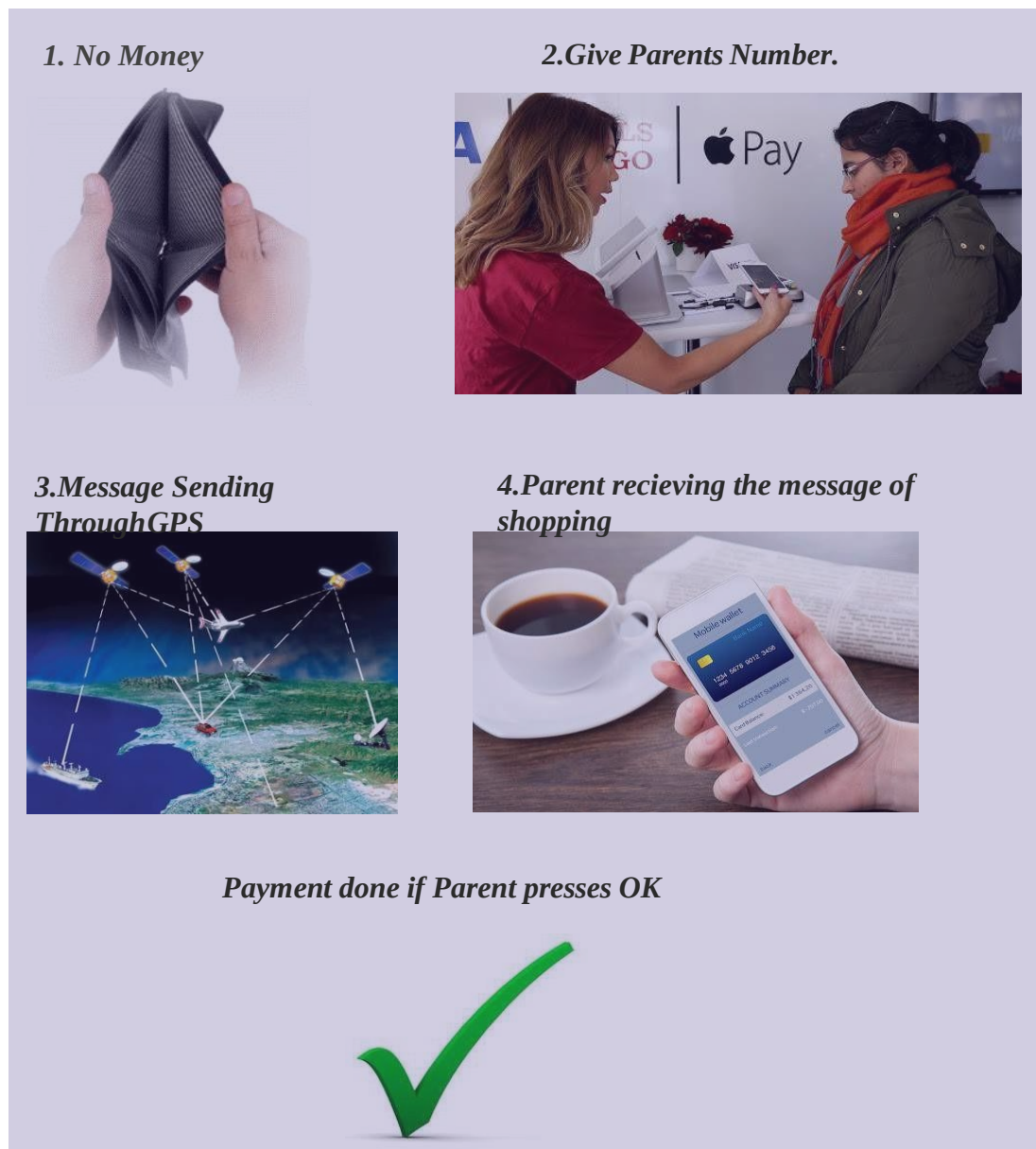
## ***BILL RECEIVED BY THE CUSTOMER***

This will deduct the bill amount from our bank account and adding to the cashier's account, further deleting the number from the mobile of the cashier for avoiding its misuse.

### ***TRANSFER OF MONEY***

Why GPS?, if we don't have bank balance, then we can enter our parents or friends no. on the cashier's mobile phone along with our name and number succeeding the payment and through the location of the cashier and our details, parent or friend can know that who has done the payment to whom.

DIAGRAMMATICALLY THE PAYMENT PROCESS BY THIRD PARTY IS SHOWN ON THE NEXT PAGE:



ADVANTAGES:

- No need of carrying wallet (i.e. cash, credit/debit cards).
- We can shop even we don't have cash, using the cell. no. of parent or friend.
- Reducing the chance of misusing ATM PIN, as we are not using credit/debit
- All the transaction records will saved in the database.



# How to get an Internship

## We Are Hiring Interns

An internship is a short-term, hands-on, supervised work experience with a professional organization that's designed to increase a student's knowledge of a professional career field.

Internship can be done on any field based on interest as well as professional experience. It basically widens the horizons of our learning. Whatever we learn in an internship we can use the knowledge as well as impart it in real life works.

Internships exist in a wide variety of industries and firms. An internship may be paid, unpaid, or partially paid (in the form of a stipend). Stipends are typically a fixed amount of money that is paid out on a regular basis. Usually, interns that are paid through stipends are paid on a monthly basis. Paid internships are common in professional fields including medicine, architecture, science, engineering, law, business and advertising.

Another type of internship growing in popularity is the virtual internship, in which the intern works remotely and is not physically present at the job location. It provides the capacity to gain job experience without the conventional requirement of being physically present in an office. The internship is conducted via virtual means, such as phone, email, and web communication. Virtual interns generally have the opportunity to work at their own pace.

Internship opportunities in India are career specific. College students often choose internships based on their branch of study at University. Students often see it as a way to develop their capabilities by practically applying the academic elements of their degree and as an opportunity to learn about the work environment. Most of the students apply for internships during their summer and winter breaks. In some universities, internship during the college breaks is compulsory and a part of the curriculum. Moreover, many engineering college students also term their training period in the certain industrial organization as an internship.

We have heard many students and career experts talking about internships. But do we know how to get an internship in a good multinational company?

While applying for an internship, many companies state their terms that they will pay the student based on performance. This criterion is nothing but the skills and efforts which the firm is searching for. If the style of work, the results and outcomes of the work are quite impressive to them then they might pay the student a certain amount as a stipend. Sometimes they might hire the student as a permanent employee stating that after completion of degree course that the student can join in that company as a software analyst if the course is Computer Engineering.

But the point is, What are the qualities that the internship employers, as well as the recruiters, search for in any student in today's world?

They look for confidence, culture fit, knowledge, manners, attitude, communication skills, and analytical skills, last but not the least decision-making ability with honesty.

If a candidate has these skills then he/she is a perfect candidate for that particular internship.

But sometimes in software industries the companies who have high aspirations like Microsoft, Google, Oracle etc. along with skills they also demand referrals. The applying candidate must have some connections with some employee of good rank for an internship. This is the procedure if the candidate is applying normally.

Another method is getting the internship through various coding contests. If the candidate wins such type of contests he/she is given an internship along with a good stipend.

But suppose the candidate has managed to get an interview for the internship he/she is halfway there. So next step would be to give the interview properly. While the interview puts less pressure on the physical appearance, it is still a very important step in the process of landing that internship. The most important thing to be remembered for a phone interview is not to interrupt. Wait for an opening. Listen and respond to the questions. Keep the answers brief, and address the interviewer's questions without launching an in-depth tale of your life story.

In case of In-person interviews it is necessary to dress the part, so knowing what kind of dress code is required for the industry you're interviewing for is crucial. The questions asked should be answered honestly as and with firmness in attitude and voice because many a time's body language speaks up many things and finally the candidate is rejected. So it is better to practice it once before experiencing it.

But still no one knows what is there for tomorrow, success or failure. The only thing is "Don't give up". Every rejection is a new opportunity to look for a new opportunity. And always believe you're not going to get every internship you apply for. You're going to receive a lot of "Sorry, we've chosen someone else's and even more opportunities will pass without a response at all. Never be discouraged. To get an internship, you have to be a special breed of persistent. Hence, the aim should be "Keep on Trying".

**Ayush Dev**  
**CSE III YR**  
**AIMT**



We've all been there. You're in a meeting, or on the road, or in a classroom, and you find, to your horror, that your laptop is nearly dead. But with the right practices, stretch your battery at that very moment.

### **Power Management**

So where do you start? Begin by visiting the Power Settings corner of your laptop. Many computers offer the ability to switch to an "Eco mode" that automatically adjust the way power is used (such as dimming your screen brightness) to conserve battery energy. Also pay attention to hibernation modes. Ideally, you want your laptop to enter into hibernation before the battery is totally drained – as well as during downtime when you won't be using the laptop for a while.

### **Discharging**

You don't need to totally discharge a battery and let it die to somehow reboot it – this is a dangerous practice that's very hard on your battery. It is a smart idea, however, to do a healthier battery discharge a couple times a year. Let your battery energy grow low (without bottoming it — aim for around 5 percent) and then fully recharge it, all in one go. This maintenance helps calibrate the battery gauge.

### **The battery itself**

So the best thing you can do for your battery is charge when it reaches 40 percent, and unplug it when it goes past 80 percent. Obviously this means applying a little OCD to when you plug and unplug your charger, but your battery will thank you in the long term by lasting longer.

### **Avoid extreme temperatures**

Cold temperatures usually aren't a problem, and storing a battery in a cool place is recommended, but don't leave your laptop in freezing temperatures, ever. Too much cold can kill the battery permanently.

### **Cleaning**

Most people just let their laptop battery sit, snug inside the laptop, doing its job. But it's a good idea to take your battery out from time to time and show it a little love. Every few months, detach your battery and give it a careful wipe with a soft cloth – get rid of any dust, and make sure the contact points are especially clean.

**Ayushi Raj**  
**CSE III YR**  
**AIMT**

# E V E N T S

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**Institution's Innovation Council & CSI student branch  
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Self Driven Activity

**Topic**

**Network Management  
and Ethical Hacking  
with Android**

For More Info.:  
9651828006, 007  
[www.aimt.edu.in](http://www.aimt.edu.in)

**Mr. Shantu Purkait**  
Director  
NetCamp Solutions Pvt. Ltd.

*Thursday*  
23 March 2023  
10:00 AM to 4:00 PM  
Venue- Seminar Hall, AGI

Workshop on “Network Management & Ethical Hacking withAndroid”  
by “Mr. Shantu Purkait”

Ministry of Education  
Government of India

INSTITUTION'S  
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**Workshop**

IIC Driven Activity

**Topic**

**Intellectual Property Rights  
(IPR) and IP management  
for startups**

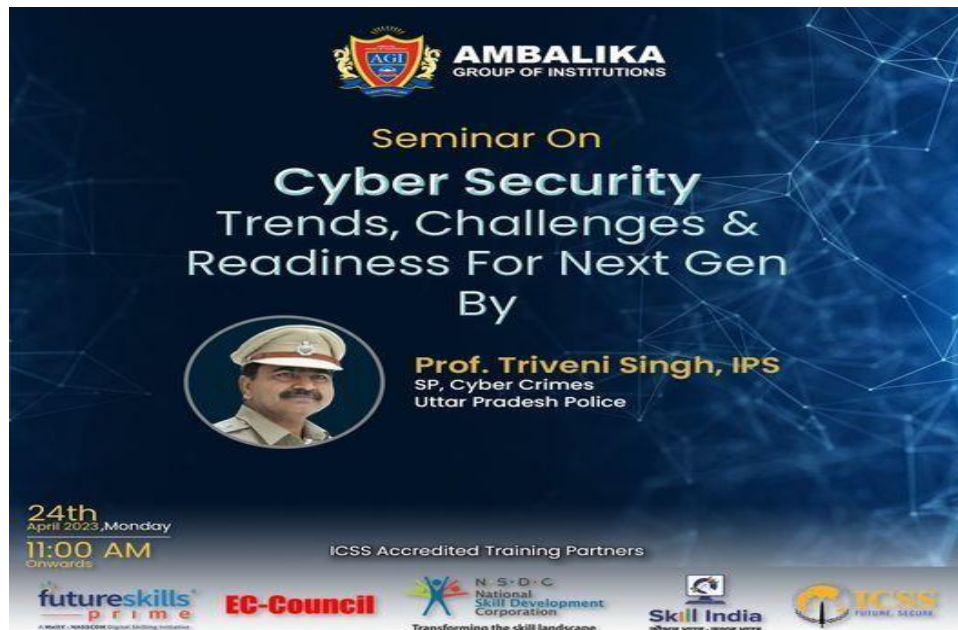
For More Info.: 9651828006, 007  
[www.aimt.edu.in](http://www.aimt.edu.in)

**Mr.Rajesh Mehtani**  
Director (Retd) Center for Excellence  
& Training UP Housing &  
Development Board, Lucknow  
UP State Resource Person for RTI,Sevottam,  
Janhit Guarantee Act and RERA

*Friday*  
19th May 2023  
2:30 PM Onwards  
Venue- Seminar Hall, AGI

Workshop on “Intellectual Property Rights & IP Management”by  
“Mr. Rajesh Mehtani”

# Seminar



## Seminar on “Cyber Security Trends, Challenges & Readiness for Next Generation” by Prof. Triveni Singh, IPS, SP Cyber Crimes, U.P. Police

The technique of protecting networks, computers, servers, mobile devices, electronic systems, and data from hostile intrusions is known as cyber security. It is often referred to as electronic information security or information technology security.

Protecting data is the basic goal of cyber security. To defend against cyber attacks, the security sector offers a triangle of three interconnected concepts. The CIA trio is the name given to this idea. The information security infrastructure of an organization should be governed by policies that follow the CIA model. One or more of these rules have been broken whenever a security breach is discovered.

The three components of the CIA model are availability, confidentiality, and integrity.

## INTERNAL HACKATHON 2023

The Smart Ambalika Hackathon (Internal Hackathon) was a one-day event that brought together students from Ambalika Institute of Management & Technology, Lucknow to showcase their innovative ideas and solutions for 20 problem statements from National Security agencies of our country. The event was organized by the Innovation Cell, Ministry of Education, Government of India, and was hosted at Ambalika Institute of Management and Technology



### NOMINATED TOP TEAMS

Team Name- Creative Tech. Minds

Team Name- TechnoCraft

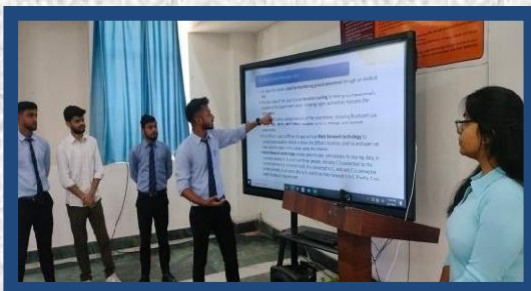
Team Name- Hackover

Team Name- Saftey Mode

Team Name- B-Squad



# GLIMPSE OF INTERNAL HACKATHON



## NICE 2023





**WELCOME TO**

# NICE 23

**NATIONAL INTER-COLLEGE  
CROSSWORD EXPEDITION 2023**

**ZONAL FINALS**

**EAST ZONE**  
9<sup>th</sup> JUNE, PATNA  
CHANDRAGUPT INSTITUTE  
OF MANAGEMENT PATNA

**NORTH ZONE**  
27<sup>th</sup> JUNE, DELHI  
JAGAN INSTITUTE OF  
MANAGEMENT & STUDIES, ROHINI

**WEST ZONE**  
21<sup>st</sup> JUNE 2023  
NITIE MUMBAI

**NORTH EAST ZONE**  
23<sup>rd</sup> JUNE, GUWAHATI  
NERIM GROUP OF INSTITUTION  
PADAMNATH SARMA BHAWAN

**SOUTH ZONE**  
3<sup>rd</sup> JULY, BENGALURU  
ACHARYA INSTITUTE  
OF TECHNOLOGY

Reporting at 0930 hrs | Prelims at 1030 hrs



Queries at [extracindia@gmail.com](mailto:extracindia@gmail.com) please  
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## NICE 2023 FINALIST

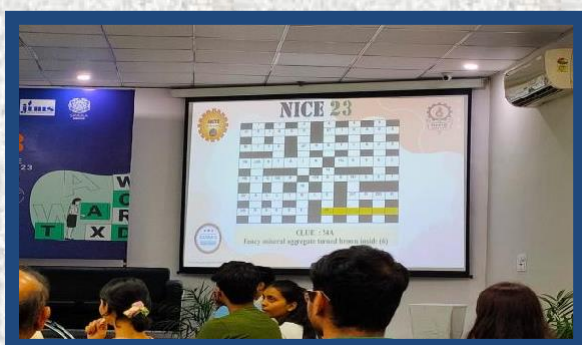
## Finalist

1. KUMAR SATYAM(CSE 3<sup>RD</sup>)
2. SHIVANI SINGH(CSE 3<sup>RD</sup>)

## Semi –Finalist

1. KAUSHLENDRA PRATAP  
VERMA(CSE 3<sup>RD</sup>)
2. ABHISHEK MISHRA(CSE 3<sup>RD</sup>)
3. ABHISHEK SINGH(CSE 3<sup>RD</sup>)

## GLIMPSE OF NICE 2023





**Computer  
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