# NATIONAL ENGINEERING COLLEGE

(An Autonomous Institution - Affiliated to Anna University, Chennai)

## K.R.NAGAR, KOVILPATTI-628 503

Estd : 1984

# DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

# NEWSLETTER

## OCTOBER 2022 - JANUARY 2023

# NATIONAL ENGINEERING COLLEGE

**(An Autonomous Institution Affiliated to Anna University, Chennai)**
**K.R.NAGAR, KOVILPATTI – 628 503**

## DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

### VISION

❖ To produce globally competent, innovative and socially responsible computing professionals.

### MISSION

❖ To provide world-class teaching-learning and research facilities.

❖ To stimulate students' logical thinking, creativity, and communication skills effectively.

❖ To cultivate awareness about emerging trends through self-initiative.

❖ To instill a sense of societal and ethical responsibilities.

❖ To collaborate with industries and government organizations.

### PROGRAMME SPECIFIC OUTCOME (PSOs)

❖ To promote an innovation ecosystem for implementing products andservices.

❖ To develop entrepreneurial skills for supporting modern and challengingcommunity needs.

# PREFACE

Dear All,

We are delighted to host our Newsletter on a Quarterly basis for highlighting the achievements of our faculty members and budding Computing Engineers. Students participating in various events such as Campus Drives, Hackathons, Coding Contests, Journal Publications and Internships are timely gathered and enlightening and motivating others to perform well. Also, it brings highlights about faculty publications in SCI and Scopus, Industry-Know-How, FDPs (attended/ organized) as well as awards achieved to gear them towards their area of specializations.

I congratulate the Editorial team for their sincere effort on bringing this fruitful outcome in a smoother way.

**Dr.V.GOMATHI, M.Tech., PhD.,**
**Professor & Head**
**Department of Computer Science and Engineering**
**National Engineering College, Kovilpatti**

# INDEX

# I  DEPARTMENT  ACTIVITIES

## "Education is the art of making man ethical"

– Georg Wilhelm Friedrich Hegel

## 1.1 EVENTS  ORGANIZED

❖ Department of Computer Science and Engineering organized an Alumini interaction program "**Internship and Placement Opportunities via Linkedin**" on 08.10.2022. Mr. H. Muthu Mariappan, delivered a special address to the Freshman Engineers.

❖ A National level technical symposium **"HitechFest 2k22"** organized by the Department of Computer Science and Engineering at National Engineering College on 18.11.2022.

❖ Dr.V.Gomathi, Professor and Head of the Department delivered Welcome Address. Mr.B.Mahadevan,working in Zoho, alumnus of our college, presided over as chief guest and also delivered chief guest address to our students.

❖ Various technical and non technical events were conducted for students. Many students were eagerly participated and won prizes.



❖ Department of Computer Science and Engineering conducted a Parent Teacher Association's Meeting on 20.11.2022. Many parents came and interact with their ward's tutor about their academic performance and extracurricular activities.



❖ **ONE-DAY Workshop on "Augmented Reality and Virtual Reality"** organized bythe Image Processing Research Center, Department of Computer Science and Engineering at National Engineering College on 07.01.2023. Over 67 students from II year CSE participated.

> **BOARD OF STUDIES Meeting**

18<sup>th</sup> Board of Studies meeting was held on **24.12.2022** at CSE seminar hall.

## List of External members

**Anna University Nominee**

**1. Dr. G.Madhupriya**

Associate Professor,

Dept. of Computer Science and Engineering Thiagarajar College of Engineering, Madurai.

**Academic Experts**

**2.  Dr.C.Mala**

Professor,

Dept. of Computer Science and Engineering,National Institute of Technology, Trichy,

**3. Dr.C.Krishna Mohan**

Professor & Head,

Dept. of Computer Science and Engineering, Indian Institute of Technology Hyderabad, Hyderabad.

**4. Dr.G.R.Karpagam**

Professor,

Dept. of Computer Science and Engineering,PSG College of Technology, Coimbatore.

**5. Dr. G. Kousalya**

Professor & Head,

Dept. of Computer Science and Engineering, Coimbatore Institute of Technology, Coimbatore.

**Industrial Experts**

**6. Mr.S.Maheswaran**

Engineering Manager & HBT Madurai Leader,Honeywell Technology Solutions, Madurai.

**7. Mr.S.Maheswaran**

Engineering Manager & HBT Madurai Leader,Honeywell Technology Solutions, Madurai.

**8. Mr.Srinivasan Rajendren**

Service Delivery Manager, Tata Consultancy Services, Chennai

**9. Mr.D.Siddharthan**

Delivery manager, Wipro Technologies Pvt Ltd, Chennai

**10. Mr.Roy Antony Arnold**

Lead – Education and Research,Infosys Pvt Ltd, Chennai

**Alumni and Industrial Experts**

**11. Ms.G.Maria Justin Mary**

Lead S/W Engineer, Lowe's India, Bengaluru.



> ➢ NBA Expert team visited our college from 28.10.2022 to 30.10.2022 for accreditation and also our department got 3 years of accreditation.

# II STUDENT ACHIEVEMENTS

**"Don't let your learning lead to Knowledge. Let your learning lead toAction."**

– Jim Rohn

## 2.1 Placement Details

| S.No | Reg.No | Name of the Student | Name of theCompany | Job Role | Salary (LPA) |
|------|--------|---------------------|---------------------|----------|--------------|
| 1. | 1912008 | GANGA DEVI.G | Renault Nissan Technology & Business Centre India | Graduate Engineering Trainee | 4.25 |
| 2. | 1912073 | KEERTHIGA M | Renault Nissan Technology & Business Centre India | Graduate Engineering Trainee | 4.25 |
| 3. | 1912068 | KARTHICK RAJA J | Renault Nissan Technology & Business Centre India | Graduate Engineering Trainee | 4.25 |
| 4. | 1912026 | SHRII SUDHAN .K | TCS Pvt Ltd, Chennai | Assistant System Engineer-Trainee | 3.36 |
| 5. | 1912070 | KARTHIRAM A | TCS Pvt Ltd, Chennai | Systems Engineer | 7 |
| 6. | 1912060 | HAQEEM ALAM S M | TCS Pvt Ltd, Chennai | Assistant System Engineer-Trainee | 3.36 |
| 7. | 1912033 | VAIDYANATHAN K | TCS Pvt Ltd, Chennai | Assistant System Engineer-Trainee | 3.36 |
| 8. | 1912115 | THAHIR IBRAHIM S | TCS Pvt Ltd, Chennai | Systems Engineer | 7 |
| 9. | 1912078 | MARY SHIPANI J | TCS Pvt Ltd, Chennai | Assistant System Engineer-Trainee | 3.36 |
| 10. | 1912103 | SHENBAGARAMAN S | TCS Pvt Ltd, Chennai | Assistant System Engineer-Trainee | 3.36 |
| 11. | 1912014 | KARTHIKEYAN.I | TCS Pvt Ltd, Chennai | Assistant System Engineer-Trainee | 3.36 |
| 12. | 1912082 | MUTHUSELVI.A | TCS Pvt Ltd, Chennai | Assistant System Engineer-Trainee | 3.36 |
| 13. | 1912041 | KALEESWARAN.M | TCS Pvt Ltd, Chennai | Assistant System Engineer-Trainee | 3.36 |
| 14. | 1912075 | LAVANYA A M | TCS Pvt Ltd, Chennai | Assistant System Engineer-Trainee | 3.36 |
| 15. | 1912123 | VIVEK.V | JMAN Digital ServicePvt Ltd, Chennai | Software Engineer | 3.5 |
| 16. | 1912123 | VIVEK.V | Soft Square | Software Engineer | 3 |

*We congratulate all the students for their career achievements. Also we appreciate the studentswho received the offers with higher package of 7 Lakhs.*

## 2.2 Internship Details

| S.No | Reg.No | Name of the Student | Name of the Company | Job Role | Internship Stipend |
|------|--------|---------------------|---------------------|----------|--------------------|
| 1. | 1912034 | VAISHNUPRIYA.S | Exalca | Software Trainee | 3 |
| 2. | 1912404 | SIVA SUBRAMANIAN V | ThinkSquare Technologies Pvt. Ltd, Bangalore | Java Developer | 3 |
| 3. | 1912028 | SIVAPRAKASH. M | ThinkSquare Technologies Pvt. Ltd, Bangalore | Java Developer | 3 |
| 4. | 1912089 | PRASATH .B | Zoho Corporation Pvt Ltd, Chennai | Member Technical Staff-QA | 7 |
| 5. | 1912076 | LOGANAYAKI M | COMCAST Pvt Ltd, Chennai | DevOps Engineer | 6.5 |
| 6. | 1912093 | RAJAPAUL .M | COMCAST Pvt Ltd, Chennai | Quality and Automation Engineer | 7 |
| 7. | 1912102 | SHENBAGALAKSHMI .S | COMCAST Pvt Ltd, Chennai | DevOps Engineer | 6.5 |
| 8. | 1912002 | AJAY RAJENDRAN S | COMCAST Pvt Ltd, Chennai | Quality and Automation Engineer | 7 |
| 9. | 1912057 | GOKUL KARTHICK P | COMCAST Pvt Ltd, Chennai | Quality and Automation Engineer | 7 |
| 10. | 1912104 | SHIVAGANESH PANDIAN | COMCAST Pvt Ltd, Chennai | Quality and Automation Engineer | 7 |
| 11. | 1912118 | VIGNESH S | Gulf Asia Engineering and Project PVt LTd, Chennai | Graduate Engineering Trainee | 3.6 |

➢ We congratulate our **III Year Students Santhosh Pandian.A, Bhuvanesh.R and Thaila Shree.S** for securing **Internship at ZOHO** via Cliqtrix Contest.

## 2.3 Extracurricular/Co curricular Achievements

➤ Our III Year CSE students have participated in Hockey Competition held on 26th November 2022, Organized by Anna University Sports Board and won **2nd Prize**.

> ASHOK A
> RAMALINGAM A
> MUTHU KUMAR K
> GOWTHAM C



➤ Our CSE Students have attended various NPTEL Courses on July 2022 – Dec 2022. Out of 241 students participated,

- 132 students got Elite Certification

- 3 students got Silver Certification

- 30 students got Elite + Silver Certification

- 76 students Successfully Completed Certification

➤ **R.Karthick , G.Abishek** from 2nd CSE got **1st Prize** in Paper Presentation at Paavai Engineering College, Namakkal held on 20-10-2022 and 21-10-2022.

➤ **R.Karthick, T.Balaji** from 2nd CSE got **2nd Prize** in Connectivity at Paavai Engineering College, Namakkal held on 20-10-2022 and 21-10-2022.

➢ **G.Thirunavukarasu**, **P.K.Ashwin Kanth, C.Gopaalakrisnan** from 2<sup>nd</sup> CSE got **1<sup>st</sup> Prize**in Paper Presentation at Sri Ramakrishna Engineering College, Namakkal held on 02-11- 2022.



➢ Our student **Baskar Sethu.A** from II year BE CSE have represented as a playerin Tamil Nadu State Team for National Championship of Sepak Takraw game held from 5th Dec to 11 Dec 2022 at Patna, Bihar . They are runner up in semifinal and won **Bronze Medal.**

## 2.4 Project/Product Development

➢ TRYCAE Industrial Engineering Pvt. Ltd, K.K Nagar, Trichy sponsored a consultancy services for a VR & AR Project to Indian Navy under Image Processing Research Center entitled on: "Design and Development of Virtual Assistant with AI/ML and AR Tools, deployed onboard ships/submarines to support maintenance crew for Radar System". with a total cost of Rs 5 Lakhs as Service Charges through the consultancy work and its deliverables for  Dr.V.Gomathi, HOD/CSE and Mr. J.Karthikeyan, AP/CSE on 3.12.2022.

## 2.5 Intra  College/Department  Achievements

➢ Quiz Club of our college has conducted a Quiz competition on 24.08.2022 in association with Russian Center of Science and Culture, Chennai, in which 106 have participated of which 18 Students were selected for Round II, conducted on between 18.10.2022 and 20.10.2022. From our department 2 studentswere selected for Round II.

| S.No | Register Number | Name | Department |
|------|-----------------|------|------------|
| 1. | 2012056 | Nisha.B | III Year CSE |
| 2. | 2012060 | Jeyaram.P | III Year CSE |

➢ **Bhavani.K** of II Year CSE secured **II Prize** in Just –a-Minute at National Engineering College held on 20.11.2022.

➢ **R.Garpahaganesh** from 2nd CSE got **I Prize** in Codeathon at Hi-Tech Fest'22 National level technical IntraCollege Symposium on November 2022.

- **Kirthana.S** of II Year CSE secured **I Prize** in Singing Competition on Voters Day Celebration at National Engineering College on25.01.2023.
- **Priyadharshini.N** of II Year CSE has won **II Prize** in RYLA program conducted by Rotract club winning **"Emerging participant Award"** with a cash award of **Rs 1500/-**



# III FACULTY ACHIEVEMENT

*"What the teacher is, is more important than what he teaches"*

– Karl Meninger

## 3.1 Higher Degree Achievement

| S.No. | Name of the Faculty | Designation | Degree | Date of Award |
|-------|---------------------|-------------|--------|---------------|
| 1. | Dr.B.Shunmugapriya | AP(SG) | Ph.D | 14.10.2022 |

- **Mr.J.Karthikeyan,** AP/CSE has registered for Ph.D on January 2023.

## 3.2 Appreciation/Recognition

➢ **Dr.S.Kalaiselvi,** Associate Professor/CSE has been recognized as research supervisor under Anna University Chennai.

➢ **Dr.B.Shunmugapriya**, AP(SG)/CSE has been recognized as NPTEL Discipline Star, December 2022.

➢ **Ms.D.Abisha**, AP/CSE has been recognized as Top Performing Mentor of the following NPTEL Course, July- December 2022.
   ❖ Cloud Computing
   ❖ Software Testing
   ❖ Introduction to Industry 4.0 and Industrial Internet of Things



## 3.3 Research  Publications

### 3.3.1 International Journal publications

➢ **Dr.J.Naskath, Dr.G.Sivakamasundari,** Dr. A. Alif Siddiqua Begum "A Study on Different Deep Learning Algorithms Used in Deep Neural Nets: MLP SOM and DBN", Wireless Personal Communication, October 2022 (SCI).

➢ **Dr.V.Gomathi,** Usha Kingsly Devi K, "Deep Convolutional Neural Networks with Transfer Learning for Visual Sentiment Analysis", Neural Processing Letters, Impact Factor 2.565, November 2022 (SCI).

➢ M Murugappan, NB Prakash, R Jeya, A Mohanarathinam, **Dr.GR Hemalakshmi,** Mufti Mahmud, "A novel few-shot classification framework for diabetic retinopathy detection and grading", Measurement, Volume – 200, page no: 1-14, 2022 (SCI).

➢ A Mohanarathinam, CS Manikandababu, NB Prakash, **Dr.GR Hemalakshmi,** Kamalraj Subramaniam, "Diabetic Retinopathy Detection and Classification using Hybrid Multiclass

SVM classifier and Deep learning techniques", Mathematical Statistician andEngineering Applications, Volume – 71, page no: 891–903, 2022 (SCOPUS).

➢ Ms.M.Pappathi Jancy Rani, **Dr.B.Shunmugapriya, Mr.A.Shenbagharaman,** "Energyand QOS Aware link quality based clustering protocol in WBAN", Journal of Pharmacheutical negative results, Volume – 14, page no: 1743-1754, Jan 2023 (SCOPUS).
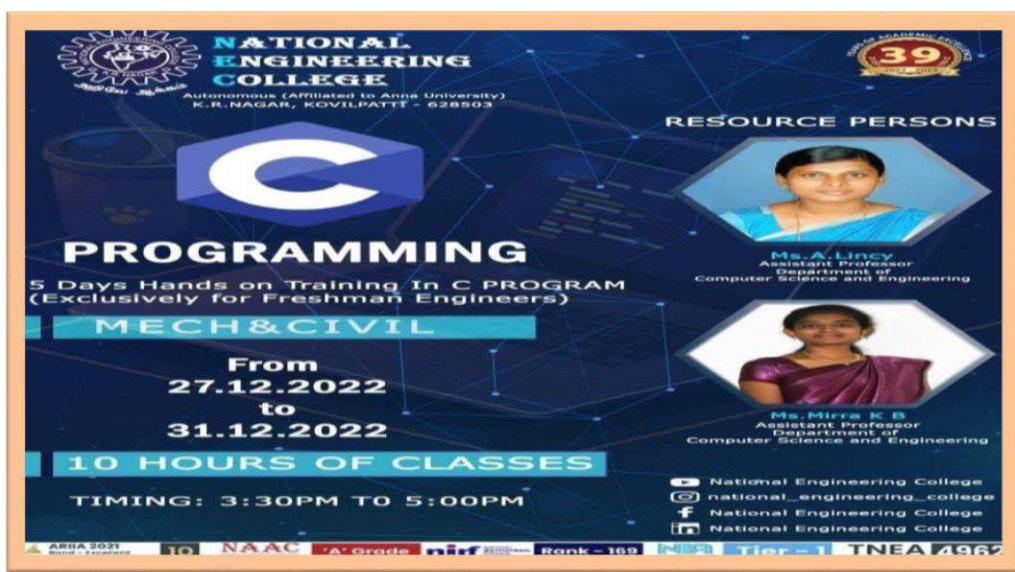
## 3.4 Resource Person / Expert Lecture

➢ **Mr.J.Karthikeyan,** Assistant Professor, Department of Computer Science and Engineering delivered a guest lecture on "Introduction to Augmented Reality and Virtual Reality", for First year CSE students at National Engineering College on 26.11.2022.



➢ **Dr.B.Shunmugapriya,** AP(SG)/CSE, acted as a resource person for a Seminar on "Advanced Protocol and Network Virtualization", held on 22.10.2022 organized by RMD Engineering College, Chennai.

➢ **Dr.J.Naskath,** AP(SG)/CSE, delivered a guest lecture on "Real time Exposure to Software Engineering Practices", held on 14.11.2022 organized by Meenakshi Sundarrajan Engineering College.

➢ **Ms.A.Lincy,** AP/CSE & Ms.K.B.Mirra, AP/CSE, acted as resource person for a Workshop on "Hands-On Training in C", from 27.12.2022 to 02.01.2022, organized by National Engineering College.



**3.5FDP/Seminar/Industry Know How Attended Details**

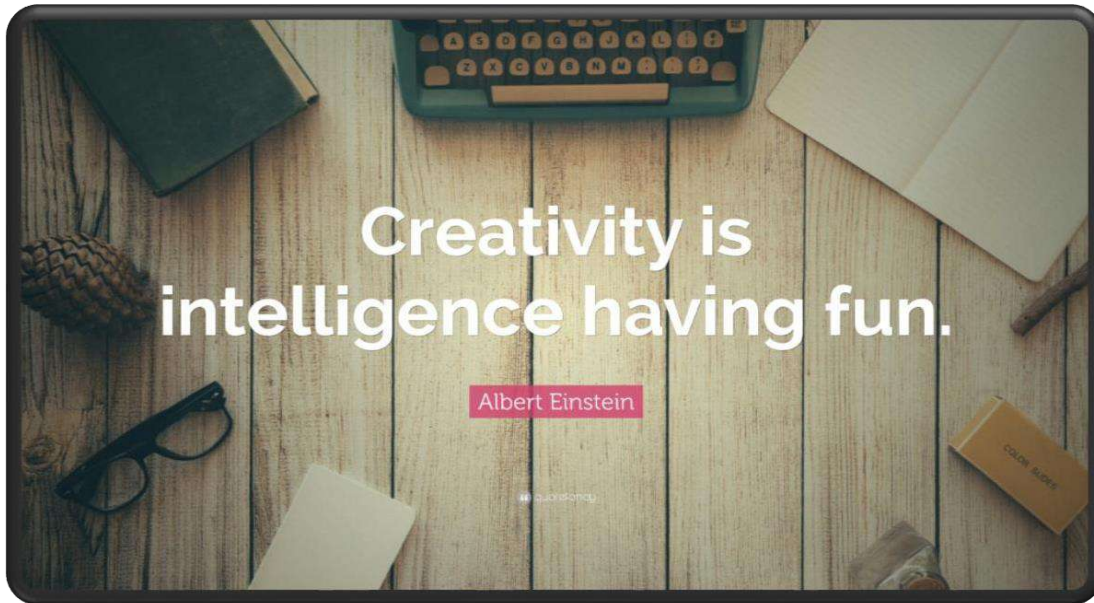| Sl. No. | Name of the Faculty | Nature of the Program | Title | Organized by | Date |
|---|---|---|---|---|---|
| 1 | Ms.D.Abisha | NPTEL FDP | Introduction To Industry 4.0 And Industrial Internet Of Things | IIT -Kharagpur | Jul-Oct 2022 |
| 2 | Mr. J.Karthikeyan | FDP | Data Structure and Algorithms using Java | IIT Kharagpur | July - Oct 2022 |
| 3 | Dr.B.Shunmugapriya | NPTEL - Elite Certification | Operating System Fundamentals | IIT Khar agpur | Jul-Oct 2022 |
| 4 | Mr. J.Karthikeyan | Training | AR/VR | Government College of Engineerin Tirunelveli. | 30th Sep 2022 |
| 5 | Mr. J.Karthikeyan | Industry Know How - Naan Mudhalvan Training of Trainers | Augmented Reality, Virtual Reality & Metaverse Development | Ingage Technologies | 30th Sep 2022 |
| 6 | Ms.P. Abitha | FDP | Microsoft Azure AI Engineer Associate | ICT ACADEMY,Tamil Nadu | 17th Oct 2022 to 21st Oct 2022 |

| Sl. No. | Name of the Faculty | Nature of the Program | Title | Organized by | Date |
|---|---|---|---|---|---|
| 7 | Ms. R.NavedhaEvanjalin | FDP | Python Programming - A Practical Approach | E & ICT Academy, IIT Kanpur | Nov-Dec 2022 |
| 8 | Dr. Ida Christy J | FDP | Python Programming - A Practical Approach | E & ICT Academy, IIT Kanpur | Nov-Dec 2022 |
| 9 | Dr.S.Dheenathayalan | FDP | A Framework for Interoperable Blockchain to Streamline Supply Chain Communications | NIT Puducherry | 28th Nov 2022 to 02nd Dec 2022 |
| 10 | Ms.Lincy A | FDP | Python Programming - A Practical Approach | E & ICT Academy, IIT Kanpur | Nov-Dec 2022 |
| 11 | Ms.V.Veera Anusuya | FDP | Python Programming - A Practical Approach | E & ICT Academy, IIT Kanpur | Nov-Dec 2022 |
| 12 | Dr.B.Shunmugapriya | Webinar | Industry Standard Web App: Design to Deploy | Ansar Women's College | 5th Nov 2022 |
| 13 | Mr.Rajeshkumar S | FDP | Programming With Angular 13 | Infosys | 21st Nov 2022 to 25th Nov 2022 |
| 14 | Ms.R.Vazhan Arul Santhiya | Industry know how(FEP) | Java programming | Infosys springboard | Nov 2-Nov 9 2022 |
| 15 | Ms.P.Priyadharshini | FDP | Machine Learning for Real World Applications and Research Directions with Programming Skills | SRM Institute of technology | 5th Dec 2022 to 10th Dec 2022 |
| 16 | Dr.J.Naskath | Inventors Challenge | Project Presentation | ATAL and ARM Community | 05th Dec 2022 |
| 17 | Ms.K.B.Mirra | FDP | Machine Learning for Real World Applications and Research Directions with Programming Skills | SRM Institute of technology | 05th Dec 2022 to 10th Dec 2022 |
| 18 | Dr.K.Mohaideen Pitchai | GIAN Course | Randomized Methods for Approximation and Parameterized Algorithms | IIT Gandhinagar | 05th Dec 2022 to 09th Dec2022 |

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| Sl. No. | Name of the Faculty | Nature of the Program | Title | Organized by | Date |
|---|---|---|---|---|---|
| 19 | Dr.B.Shunmugapriya | Coursera – Online Course | Introduction to Networking and Storage | IISc Bangalore | 21st Dec 2022 |
| 20 | Dr. R.Rajakumari | Workshop | INTELLECTUA L PROPERTY RIGHTS, TECHNOLOGY TRANSFER & ENTREPRENEU RSHIP(AI&DS) | NIT Trichy | 30th Jan 2023 to 03rd Feb 2023 |
| 21 | Dr. G.R.Hemalakshmi | Workshop | INTELLECTUA L PROPERTY RIGHTS, TECHNOLOGY TRANSFER & ENTREPRENEU RSHIP(AI&DS) | NIT Trichy | 30th Jan 2023 to 03rd Feb 2023 |
| 22 | Dr.S.Kalaiselvi | Online Short term course | Artificial Intelligence Machine Learning and Deep learning | NIT Warangal | 27th Jan 2023 to 31st Jan 2023 |
| 23 | Ms.D.ThamaraiSelvi | Online Short term course | Artificial Intelligence Machine Learning and Deep learning | NIT Warangal | 27th Jan 2023 to 31st Jan 2023 |
| 24 | Dr.G.Sivakamasundari | FDP | Statistical and Machine Learning Techniques with Applications | IIIT Kalyani | 02nd Jan 2023 to 06th Jan 2023 |
| 25 | Mr. J.Karthikeyan | Field Visit | To visit Brahmaputra warship | Western Naval Dockyard, Mumbai | 12th Jan 2023 |
| 26 | Mr. J.Karthikeyan | Exhibition | IMTEX Exhibition | Bengaluru International Exhibition Centre | 23rd & 24th Jan 2023 |

## 3.6 New Faculty Members List

| Sl.No. | Name of the faculty | Date of Joining |
|---|---|---|
| 1. | Ms. S.G.Janani Ratthna | 09.01.2023 |

# Creativity Corner



Creativity is intelligence having fun.

Albert Einstein

# தமிழ் கவிதை

காலத்தின் கணக்கு

நொடிகள் நிமிடங்களாக
வேண்டும் - நிமிடங்கள் மணிநேரங்களாக
வேண்டும் - முடிவில்லா இரவாக இதுவாக வேண்டும் ...
காலமும் மெதுவாக வேண்டும் .....

அறுசுவை உணவை ருசிப்பதற்கல்ல...
பௌர்ணமி நிலவை ரசிப்பதற்கல்ல ...
ஊதக்காற்றில் கிறங்குவதற்கல்ல ...
மனம் ஆழ்ந்து உறங்குவதற்கல்ல....

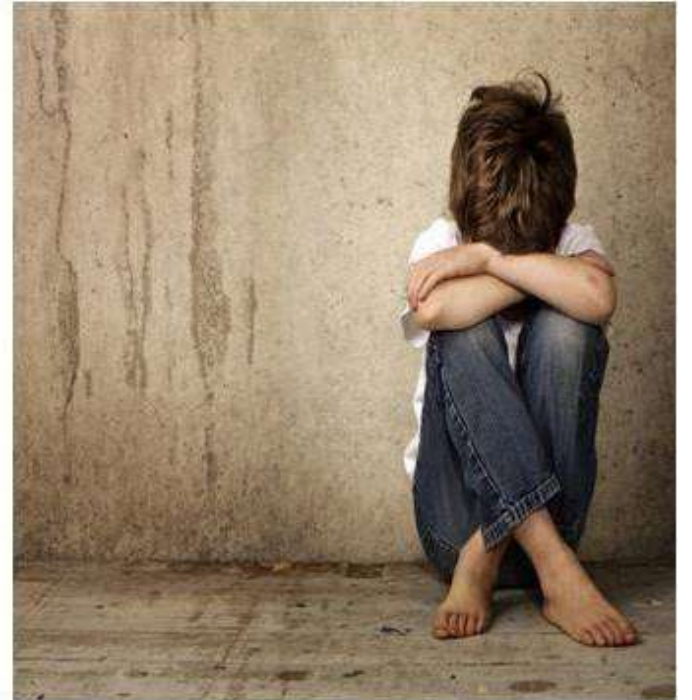மறுநாள் கணக்குத் தேர்வுக்கு
முதலில் இருந்து படிப்பதற்காக.....

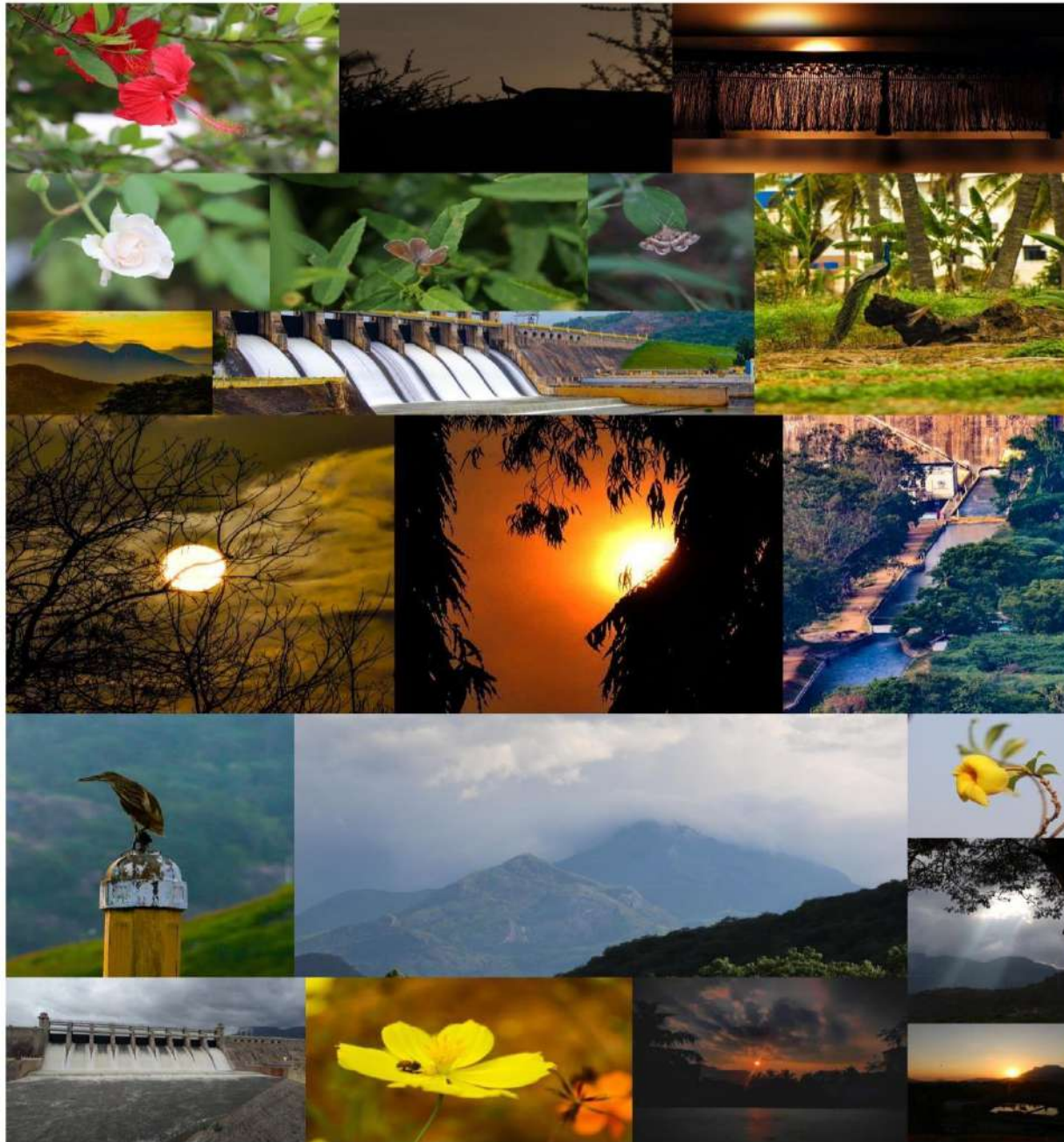<div align="right">ர. கர்ப்பஹகணேஷ்.<br>II year CSE</div>



## தனிமை

நண்பர்கள் இருந்தும்
சொந்தபந்தம் இருந்தும்
யாரும் இல்லார்போல்
நொடிப் பொழுதையும்
ரணமாக்குகிறது- நெஞ்சில்
குத்திக் கொண்டிருக்கும்
நஞ்சான தனிமை....

ர. கர்ப்பஹகணேஷ்.
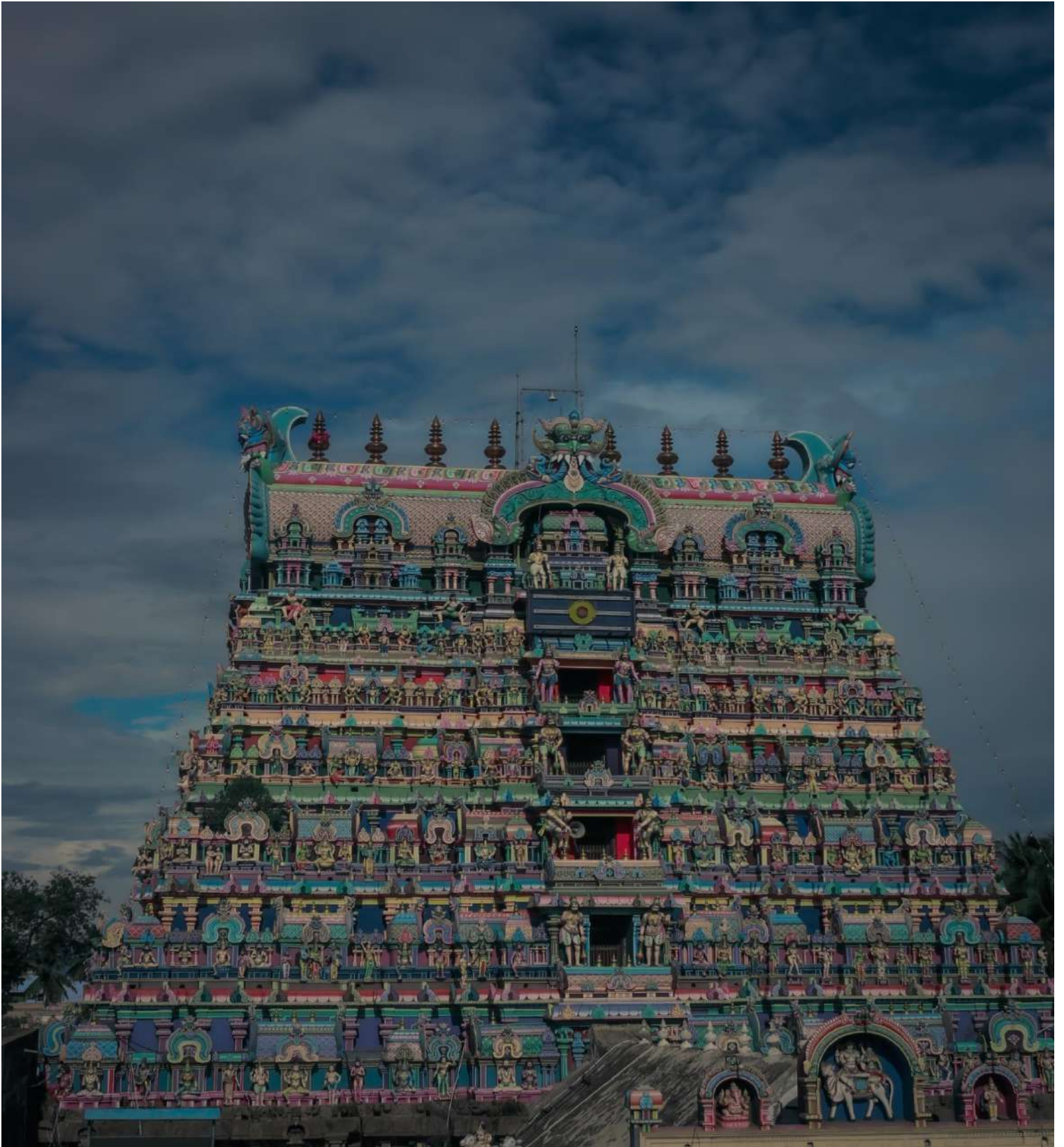2112023
II Year CSE

# CLICKS BY OUR BLOOMING ENGINEERS



"WE ARE MAKING PHOTOGRAPHS TO UNDERSTAND WHAT OUR LIVES MEAN TO US"

**S.Kishor**
**2112113**
**II Year CSE**

**V.K.Santhini**
**2112022**
**II Year CSE**

**R.Kowsalya**
**2112028**
**II Year CSE**

# Fine Art by our Artist



**S.Kesavan**
**2112065**
**II Year CSE**

# Technical Zone

## DevOps

**-  Gna.Harshini**
**2112034**
**II Year CSE**

DevOps is the combination of cultural philosophies, practices, and tools that increases an organization's ability to deliver applications and services at high velocity: evolving and improving products at a faster pace than organizations using traditional software development and infrastructure management processes. This speed enables organizations to better serve their customers and compete more effectively in the market.

Under a DevOps model, development and operations teams are no longer "siloed." Sometimes, these two teams are merged into a single team where the engineers work across the entire application lifecycle, from development and test to deployment to operations, and develop a range of skills not limited to a single function.

In some DevOps models, quality assurance and security teams may also become more tightly integrated with development and operations and throughout the application lifecycle. When security is the focus of everyone on a DevOps team, this is sometimes referred to as DevSecOps.

These teams use practices to automate processes that historically have been manual and slow. They use a technology stack and tooling which help them operate and evolve applications quickly and reliably. These tools also help engineers independently accomplish tasks (for example, deploying code or provisioning infrastructure) that normally would have required help from other teams, and this further increases a team's velocity.

As global cybersecurity and compliance concerns continue to persist, we are also noting the rise of infrastructure as a code and GitOps with cloud-native deployments as the preferred solution. DevOps tools standardization, and cloud-enabled DevOps services, and cultural transformations are some of the other major developments

As DevOps trends of 2023 take shape, it's important to understand the new capabilities available and how they can be leveraged to your advantage. By understanding how these trends may affect your long-term strategy, you can focus your efforts, empower your DevOps team, and advance your organization in this ever-evolving landscape.

# ADHD (Attention - Deficit/Hyperactivity Disorder)

**- Rajarajeswari.P**
**2251003**
**I ME CSE**

Disclaimer: The following content is for awareness purpose only. The readers are advised not to self-diagnose anything but if you relate with any of these symptoms and find it difficult to carry on with day to day activities, please seek professional help and if you identify any of these symptoms in your closed circle, share this article with them for awareness and empathize with them instead of criticizing or discriminating them.

Attention - Deficit/Hyperactivity Disorder is a neurological condition characterized by an ongoing pattern of inattention and/or hyperactivity-impulsivity that hinders functioning or development. People with ADHD experience an ongoing pattern of following symptoms

● Inattention - A person may have difficulty focusing on a task, maintaining the focus, and staying organized and these difficulties are not because of lack of comprehension or disregard.

● Hyperactivity - Hyperactivity is characterized by excessive fidgeting, tapping, talking, or moving around, even in settings where it is inappropriate. Adult hyperactivity might take the form of excessive chatting or intense agitation.

● Impulsivity - A person who is impulsive may behave without thinking or struggle with self-control. Another aspect of impulsivity is the inability to delay gratification or the need for quick fulfilment. An impulsive person could interrupt others or make crucial choices without thinking about the long-term effects.

## Types of ADHD

● Predominantly Inattentive type

● Predominantly Hyperactive/Impulsive type

● Combined Inattention-Hyperactivity/Impulsivity type

## ADHD in different age groups

● ADHD in Children (2<= age <=12)

● ADHD in adolescents (13<= age <=17)

● ADHD in Adult men and women (age >17)

## Symptoms of ADHD in Children, Adolescents, and Adults

(Source: DSM-5 Diagnostic and Statistical Manual of Mental Disorders, 5th edition; ADHD: attention deficit hyperactivity disorder)

The symptoms should have persisted for 6 months or more in more than two settings like school, home, public places etc. At least 6 symptoms for patients under the age of 17 and 5 symptoms for adults are necessary. The above two criteria are necessary for a patient to get tested for ADHD.

**Inattentiveness**

- having a short attention span and being easily distracted

- making careless mistakes

- appearing forgetful or losing things

- being unable to stick to tasks that are tedious or time-consuming

- appearing to be unable to listen to or carry out instructions

- constantly changing activity or task

- having difficulty organizing tasks

● **Hyperactivity and Impulsiveness**

- being unable to sit still, especially in calm or quiet surroundings

- constantly fidgeting

- being unable to concentrate on tasks

- excessive physical movement

- excessive talking

- being unable to wait their turn acting without thinking

- interrupting conversations

- little or no sense of danger

**Diagnosis of ADHD**

**In Children and adolescents**

A child should have shown the above mentioned symptoms for at least 6 months on a regular basis for them to be tested for ADHD. The child/adolescent should be of age between 6 and 17 but some of them show symptoms starting from the age of 2. A child/Adolescent with ADHD symptoms should undergo a series of tests to get clinically diagnosed for ADHD. Those tests include a hearing test, eyesight test, a blood test for lead levels, Brain waves tests (EEG), and a CT scan or MRI to check for brain abnormalities. The doctors look for what type of ADHD that the child/adolescent has via these tests. Besides these tests, interviews with the parents, relatives, teachers will contribute to the diagnosis. Questionnaires like The Vanderbilt Assessment Scale, Conners Scale for ADHD Assessment are also used for diagnosis but The Vanderbilt Assessment Scale also looks for other disorders like conduct disorder, anxiety, depression etc.

**In Adults**

Adult ADHD symptoms may not be as clear as ADHD symptoms in children so it is difficult to diagnose it. In adults, hyperactivity may decrease, but struggles with impulsiveness, restlessness and difficulty paying attention. A patient should have at least 5 symptoms mentioned above for more than 6 months to get diagnosed. Diagnosis of ADHD in adults can be difficult because certain ADHD symptoms are similar to those caused by other conditions, such as anxiety or mood disorders. And many adults with ADHD also have at least one other mental health condition, such as depression or anxiety. A qualified professional can determine if these problems are due to ADHD, some other cause or a combination of causes. Although some ADHD symptoms are evident since early childhood,

Some individuals may not experience significant problems until later in life. Some very bright and talented individuals, for example, are able to compensate for their ADHD symptoms and do not experience significant problems until high school, college or in pursuit of their career. In other cases, parents may have provided a highly protective, structured and supportive environment, minimizing the impact of ADHD symptoms until the individual has begun to live independently as a young adult. Adults undergo a comprehensive evaluation which includes a diagnostic interview about their symptoms of ADHD, certain records from childhood which provide potential data to back up the case that they have had ADHD in childhood too. This interview is followed by a screening for other psychiatric disorders as other mental health illnesses and disorders are often misdiagnosed as ADHD. And other mental health disorders coexist with ADHD and that too requires attention while treating ADHD. The above discussed case is caused as ADHD and other psychiatric disorders like anxiety, depression have similar symptoms. The third step is to interview the family, friends and employers, colleagues of the patient to analyze the case more, they fill up the diagnosis questionnaire and participate with the patient in the interview for the initial stage diagnosis. This is followed by a standardized behavior rating for comparing their behavior with the behavior of normal people. Another additional test is conducted to check whether other neurological condition co-exists or not.

The final test is physical body examination to check if the patient has any physical medical condition that facilitates the symptoms of ADHD. After all these tests and procedures, the examiner concludes the result of whether the patient has ADHD or not.

Brain waves test which is an EEG test is also used to diagnose.

Another form of diagnosis is carried on with the help of Brain MRI which spots the parts of the brains that are affected by ADHD. The superior longitudinal fasciculus (SLF) and cortico-limbic areas are dysfunctional in individuals with ADHD.

**ADHD in Girls/Adult Women**

ADHD in Girls/Adult Women are difficult to diagnose because of differences in their profile of symptoms, comorbidity and associated functioning compared with males. So, Brain waves test and Brain MRI can differentiate Women with ADHD from Women with no ADHD.

**Treatment of ADHD in Adults**

Treatment of ADHD in adults generally involves medication, psychological counseling, skills training and education. These treatments don't cure ADHD but they help people cope with the symptoms and carry on with their day to day life. These treatments are effective when given as a combination of two or more.

**To learn more:** Follow people on Instagram and YouTube with ADHD to know more about it and to know their stories. Read more about ADHD on legit mental health sites on web.

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