



K.RAMAKRISHNAN COLLEGE OF ENGINEERING

An Autonomous Institution

Permanently Affiliated to Anna University Chennai, Approved by AICTE New Delhi,
ISO 9001:2015, 14001:2015 certified institution, Accredited by NBA and with A grade by NAAC

Samayapuram, Tiruchirappalli – 621 112, Tamilnadu, India.



**"An investment in
knowledge pays the best
interest."**

2023 - 2024

**JULY -DEC
ISSUE -1**



Krce.ac.in



Dr. K. Ramakrishnan

CHAIRMAN

Dr. K. Ramakrishnan, the esteemed Chairman of our institution, is a visionary leader whose dedication, discipline, and dynamic outlook serve as a constant source of inspiration for the students of the Electronics and Communication Engineering (ECE) Department. A proud alumnus of Annamalai University with a B.E. in Production Engineering, he has devoted his efforts to transforming this rural region into a center of technological and educational excellence. His commitment to hard work, innovation, and leadership motivates ECE students to strive for excellence in their academic and professional pursuits, inspiring them to become creative thinkers, responsible engineers, and future leaders who contribute meaningfully to society.

Dr.S.Kuppusamy



EXECUTIVE DIRECTOR

Dr. S. Kuppusamy, the Executive Director of our institution, is a passionate academician whose dedication and commitment to excellence have shaped his career in education. He holds a B.Sc. in Electronics from Erode Arts College, an MBA from Kongu Engineering College, and a Ph.D. in Management from Bharathiar University, Coimbatore. His blend of technical knowledge and leadership inspires the Electronics and Communication Engineering (ECE) students to pursue innovation, discipline, and success in their academic and professional paths.



K
R
C
E





Dr.D.SRINIVASAN

PRINCIPAL

Dr.D.Srinivasan, The Principal of K.Ramakrishnan College of Engineering, Tiruchirappalli, is a vibrant leader with his ground-breaking approach and proven administrative process produces many young engineering professionals to this society. He received his Ph.D. and Post-Graduation in Manufacturing Technology from the nation's top grade institution NIT, Trichy. Education is not just a process of giving knowledge for a future job but a lifelong process which builds an understanding of moral and ethical values to guide one's life in a right path. KRCE not only focuses on the academic front, but also helps in the development of a student's personality, extra-curricular activities and over all perspective. Everything that makes a good institution - well equipped R&D Cells, Lab facilities for all the departments, Wi-Fi enabled campus, well stacked library with digital facility, career guidance, unique teaching methods, training for competitive examinations, liberty to think and express themselves all are available to mould them to face the challenges confidently

Dr.M.MAHESWARI



HEAD OF THE DEPARTMENT

I am deeply thankful to the Board of management, Director Principal, and the Heads of various departments. Faculty members for their consistent support and active involvement in motivational activities of our department. I extend my heart full thanks to the editorial committee members and students for their tireless effort towards releasing this magazine. Choosing electronics field as profession needs challenging creative and extraordinary mind it gives me pleasure to lead such innovative students, who are the future experts of India



K
R
C
E



DEPARTMENT OF ECE VISION

VISION

To be distinguished as a prominent program for Electronics and Communication Engineering Studies by preparing students for Industrial Competitiveness and Societal Challenges.

MISSION

M1: To equip the students with latest technical, analytical and practical knowledge.

M2: To provide vibrant academic environment and Innovative Research culture.

M3: To provide opportunities for students to get Industrial Skills and internships to meet out the challenges of the society.

The PEOs of the programme are,

PEO1: Graduates will be competent enough to design, develop and integrate complex industrial products for modern electronics and communication systems.

PEO2: Graduates will be able to propose research oriented, industry relevant design solutions in state-of-the-art electronics and communication domains.

PEO3: Graduates will be able to engage in start-up and entrepreneurial activities developing innovative prototypes for the challenging needs of the society.

PROGRAM SPECIFIC OUTCOMES (PSOs)

PSO1: Students will qualify in National level Competitive Examinations for Employment and Higher studies.

PSO2: Students will have expertise in the design and development of Hardware and Software tools to solve complex Electronics and Communication Engineering problems in the domains like analog and digital electronics, embedded and communication systems.



K

R

C

E



Ph.D degree Completed in ECE Department



Mr.Saravana N

**TITLE:Investigation on Doping Enhanced
piezophotoelectronic characteristics of ZnO
nanostructures**

SUPERVISOR:DR.M.MAHESWARI

DEPT:ECE

**SUBJECT:Information and Communication
Engineering**

Awarded Year/ Viva date:17.11.23



**K
R
C
E**



IEI Students Chapter Inauguration -ECE Branch

Student Chapter of IEI was inaugurated at Department of Electronics and Communication Engineering, K. Ramakrishnan College of Engineering, Trichy, Tamil Nadu on 25th May 2024. Dr.S.Ravimaran, Chairman, IEI, Tiruchirappalli Local Centre, Trichy was Chief Guest and Dr.D.Srinivasan, Principal, K. Ramakrishnan College of Engineering felicitated the function. Dr.M.Maheswari, Professor & Head, Department of Electronics and Communication Engineering, K. Ramakrishnan College of Engineering welcomed the guests and participants for the program and briefed about the departmental activities and achievements



Project EXPOTHON



An Internal Hackathon "Pro Expothon" was conducted by department of Electronics and Communication Engineering, K. Ramakrishnan College of Engineering, Trichy on 10-05-2024 (Friday) under the guidance of Principal Dr. D. Srinivasan and Chairman Dr. K. Ramakrishnan. In the presence of Executive director Dr. S. Kuppusamy and Principal Dr. D. Srinivasan, Head of the department Dr. M. Maheswari inaugurated this wonderful event

Symposium INTERPRONIX 24

Department of Electronics and communication has been organizing intra and inter technical symposium every year. This year also INTERPRONIX 24 was conducted in March 13, 14, 15 three-day events first time of it kind, which was an amalgamation of various technical, non-technical and on spot events.



INDEED INNOVATION - IDEA PRESENTATION



The Institution Innovation Council of K.Ramakrishnan College of Engineering organized “INDEED INNOVATION-IDEA PRESENTATION” on 29.04.2024. The event was coordinated by Ms.Radha N, Mrs.M.Kalaivani, Mrs.J.Roselin Suganthi AP/ECE, Principal & President- IIC, Dr.S.Titus, Professor/ EEE & IIC convener along with the coordinators.



ALUMNI MEET



Our Department of ECE Organized The Alumni Meet On 2.12.23 For this academic Year 2023-2024. Alumni from 2012 batch to 2020 batch students were invited for this function. We received nearly 150 responses from the alumni students. Our Honourable principal sir Dr.D.Srinivasan gave felicitation address. Our distinguished HoD Dr.M.Maheswari mam gave welcome address.various Events were conducted during this function

ECE Association Inauguration “ELECTRO ETHNARCH – 2K23”



The Department of ECE, K.Ramakrishnan college of Engineering, Trichy has organized a ECE Department Association (Electro Ethnarch '23) Inauguration on 14.10.2023. The chief guest called for this function Er. J. APPAS, Senior Engineer, Harman Internationals (Samsung), Bangalore called for this inaugural function who is an Alumni (2008 – 2012) of ECE department.

K. RAMAKRISHNAN COLLEGE OF ENGINEERING
(AUTONOMOUS)
ISO 9001:2015 Certified Institution,
Accredited by NAAC with 'A' grade
SAMAYAPURAM, TRICHY – 621 112. **nirf** NATIONAL INSTITUTIONAL RANKING FRAMEWORK
DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING
(Accredited by NBA)

ELECTRO ETHNARCH - 2K23

ASSOCIATION INAUGURATION

CHIEF GUEST:
Er. APPAS J
Alumnus : 2008-2012 Batch
Senior Engineer,
Harman Internationals (Samsung),
Bangalore, India.

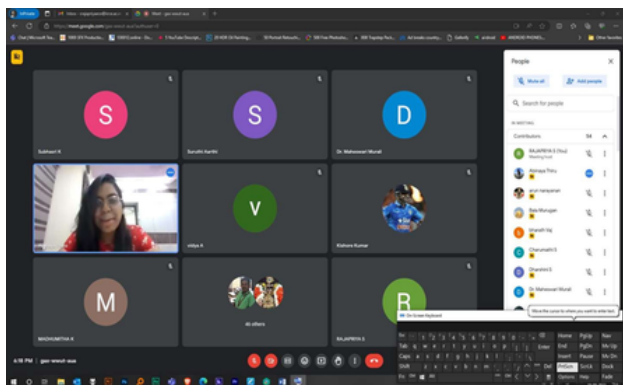


OCT | SAT 14 | 2023 | 09:30 AM

VENUE: THIRD FLOOR CONFERENCE HALL
We cordially welcome you all

Dr.M.Maheswari Dr. D.Srinivasan Dr. S. Kuppusamy Dr. K.Ramakrishnan
HoD/ECE PRINCIPAL EXECUTIVE DIRECTOR CHAIRMAN

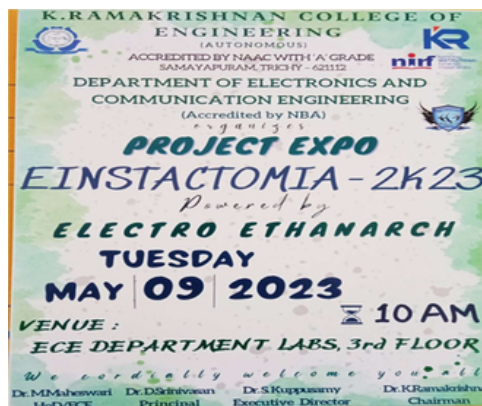
WEBINAR ON SKILL DEVELOPMENT



The Department of ECE in association with Institution's Innovation Council, K.Ramakrishnan College of Engineering, Trichy has organized a webinar on "SKILL DEVELOPMENT" on 19/08/2023. The Webinar was coordinated by Ms.S.Rajapriya, AP/ECE. The welcome address was given by Dr.M.Maheswari , HOD /ECE. The Webinar was delivered by Ms.T.Abinaya, Digital Content Associate, Amazon Prime Video, Chennai



EINSTACTOMIA-2K23



Department of Electronics & communication Engineering & The Institution Innovation Council of K.Ramakrishnan College of Engineering jointly organized "EINSTACTOMIA-2K23" (Intra college Project contest) on 09.05.2023. The event was coordinated by Mr.R.Balamurugan.AP/ECE, Mr.T.Muruganantham.AP/ECE, Mr.M.Karthick.AP/ECE, Mr.N.R.Nagarajan.AP/ECE. The event was inaugurated by Dr. D. Srinivasan, Principal/KRCE & President IIC, and welcome address was given by Dr. M. Maheswari HOD/ECE.

Dev Ops

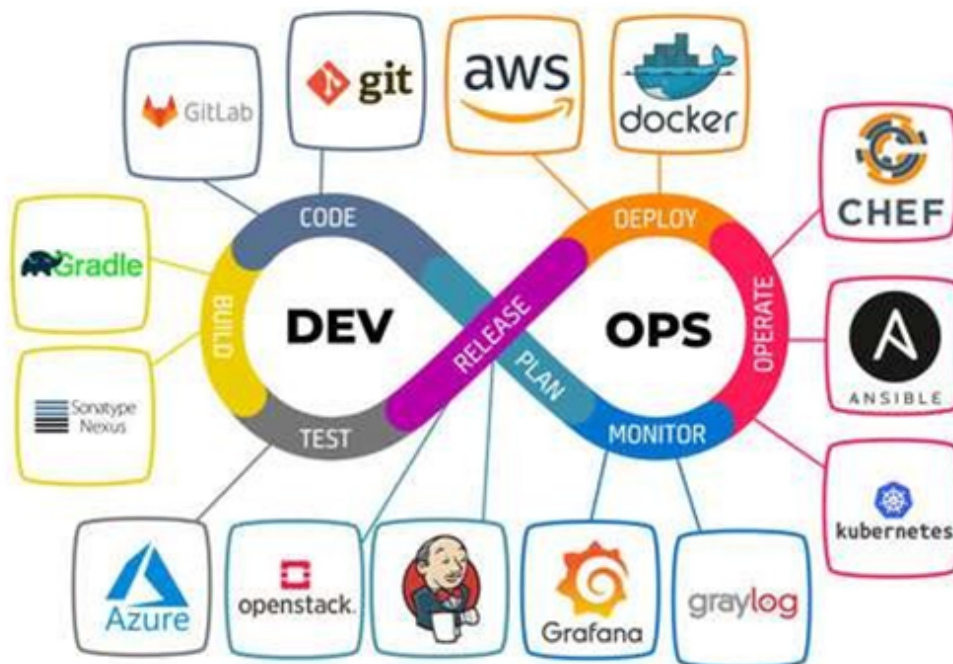
AUTHOURS:ECC2134-SHREYA ROSHINI EC & ECA2260-G. KEERTHANA

ABSTRACT

DevOps entails a set of integrated activities or practices employed in automation and interlink software development processes with IT developers with the aim of building, testing, and releasing deliverables quickly and reliably. Constantly, DevOps has resulted in the use of infinite loops by the developers or practitioners in showing the relationship between development lifecycle phases. Even though the various activities or steps in a DevOps make a loop and flow sequentially, the iteration indicates that the flow must be constantly collaborative and repetitive to improve the entire lifecycle. If well explored by DevOps, various software automation trends could be ready to handle the industry's latest software and technology

INTRODUCTION

The DevOps concept emerged to bridge the disconnect between the development of software and the deployment of that software into production within large software companies .The main purpose of DevOps is to employ continuous software development processes such as continuous delivery, continuous deployment, and microservices to support an agile software development lifecycle. Other trends in this context are that software is increasingly delivered through the internet, either server-side (e.g. Software-as-a-Service) or as a channel to deliver directly to the customer, and the increasingly pervasive mobile platforms and technologies on which this software runs . These emerging trends support fast and short delivery cycles of



delivering software in the fast-paced dynamic world of the Internet. As such DevOps has been well received in the software engineering community and has received significant attention particularly in the practitioner literature . Annual 'State of DevOps' reports show that the number of DevOps teams has increased from 19% in 2015 to 22% in 2016 to 27% in 2017 . However, as observed in recent studies, despite their growing popularity, there is a lack of empirical research on the actual practice of DevOps beyond a discussion of blog posts and industrial surveys .Beyond very few case studies ,the current literature does not provide much insight on the actual implementation and practices of DevOps and their effectiveness in supporting continuous software development.

WORKING

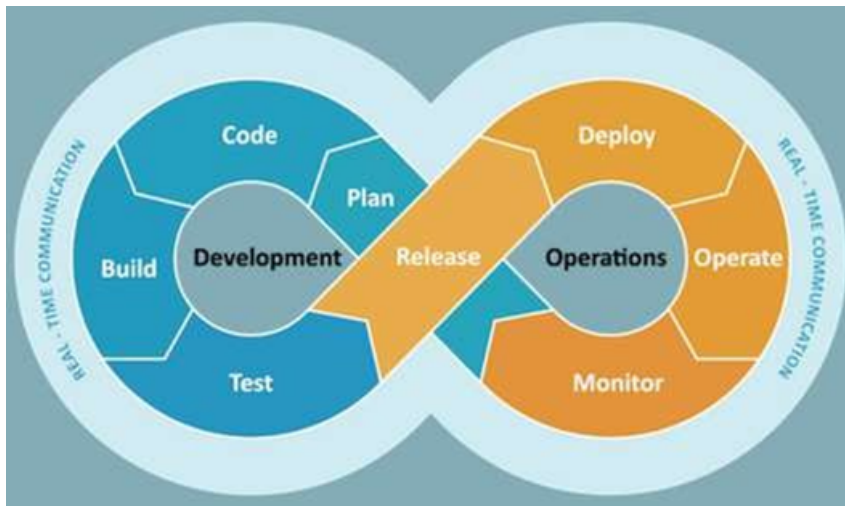
A DevOps team includes developers and IT operations working collaboratively throughout the product lifecycle, in order to increase the speed and quality of software deployment. It's a new way of working, a cultural shift, that has significant implications for teams and the organizations they work for. Under a DevOps model, development and operations teams are no longer “siloeD.” Sometimes, these two teams merge into a single team where the engineers work across the entire application lifecycle — from development and test to deployment and operations — and have a range of multidisciplinary skills. DevOps teams use tools to automate and accelerate processes, which helps to increase reliability. A DevOps toolchain helps teams tackle important DevOps fundamentals including continuous integration, continuous delivery, automation, and collaboration DevOps values are sometimes applied to teams other than development. When security teams adopt a DevOps approach, security is an active and integrated part of the development process. This is called DevSecOps.

LIFECYCLE

Because of the continuous nature of DevOps, practitioners use the infinityloop to show how the phases of the DevOps lifecycle relate to each other. Despite appearing to flow sequentially, the loop symbolizes the need for constant collaboration and iterative improvement throughout the entire lifecycle. The DevOps lifecycle consists of eight phases representing the processes, capabilities, and tools needed for development (on the left side of the loop) and operations (on the right side of the loop). Throughout each phase, teams collaborate and communicate to maintain alignment, velocity, and quality.

DISCOVER

Building software is a team sport. In preparation for the upcoming sprint, teams must workshop to explore, organize, and prioritize ideas. Ideas must align to strategic goals and deliver customer impact. Agile can help guide DevOps teams.



Plan

DevOps teams should adopt agile practices to improve speed and quality. Agile is an iterative approach to project management and software development that helps teams break work into smaller pieces to deliver incremental value.

Build

Git is a free and open source version control system. It offers excellent support for branching, merging, and rewriting repository history, which has led to many innovative and powerful workflows and tools for the development build process.

Test

Continuous integration (CI) allows multiple developers to contribute to a single shared repository. When code changes are merged, automated tests are run to ensure correctness before integration. Merging and testing code often help development teams gain reassurance in the quality and predictability of code once deployed.

Deploy

Continuous deployment (CD) allows teams to release features frequently into production in an automated fashion. Teams also have the option to deploy with feature flags, delivering new code to users steadily and methodically rather than all at once. This approach improves velocity, productivity, and sustainability of software development teams.

CONCLUSION

DevOps is a set of practices, tools, and a cultural philosophy that automate and integrate software development and IT teams, emphasizing team empowerment, communication, collaboration, and technology automation. The DevOps lifecycle is a continuous software development process that employs DevOps best practices to plan, build, integrate, deploy, monitor, operate, and offer continuous feedback throughout the software's lifecycle. DevOps tool is critical for the automation of the software development life cycle. The DevOps approach is evolving at a very fast pace and emerging tools have been designed to incorporate those with little or no programming knowledge, microservices and containerization, and other recent technologies.

Dr.K.RAMAKRISHNAN

CHAIRMAN

Dr.S.KUPPUSAMY

EXECUTIVE DIRECTOR

Dr.D.SRINIVASAN

PRINCIPAL

Dr.M.MAHESWARI

HEAD OF THE DEPARTMENT

**VINNY CLARET (IV YEAR ECE 'C' SECTION)
ROHITH RISHAN (IV YEAR ECE 'B' SECTION)
HARI PRASATH T (IV YEAR ECE 'A' SECTION)
SHREYA ROSHINI (III YEAR ECE 'C' SECTION)
HEMANTH BABU (III YEAR ECE 'B' SECTION)
HARINI S (III YEAR ECE 'A' SECTION)
S. ARAVIND – II YEAR ECE 'A' SECTION
LAKSHMAN RAM – II YEAR ECE 'A' SECTION
G. KEERTHANA – II YEAR ECE 'A' SECTION
A. PRAVEEN – II YEAR ECE 'B' SECTIONS.
PRIYADHARSHINI – II YEAR ECE 'B' SECTION
T. RAKSHITHA – II YEAR ECE 'B' SECTION**

STUDENT COORDINATORS

Mr.A.BALA KUMAR(AP/ECE)

Mr.A.VINNEY CLARET

EDITOR

