



Byte MAGAZINE(2020-2021)

Computer Science & Engineering

Volume 1,Issue 1



Dr.T. THIMMAIAH INSTITUTE OF TECHNOLOGY
(Estd. 1986) Oorgaum, Kolar Gold Fields, Karnataka – 563120
(Affiliated to VTU, Belgaum, Approved by AICTE - New Delhi)

DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING



Principal's Message

Dear Readers,

I am delighted to welcome you to the First issue of “BYTE” student’s Technical Magazine, a technical publication that showcases the latest developments and innovations in Computer Science and Engineering. I would like to congratulate and appreciate the efforts of Dr. S Sreedhar Kumar, Head of the Department, and his editorial team for this magazine. They have done a commendable job in bringing out this issue, which features articles on topics for the overall development for the student’s fraternity. The magazine also highlights some of the achievements and activities of our students, faculty and industry partners of Computer Science and Engineering Department. I hope you enjoy reading this magazine and find it informative and inspiring. I urge you to keep learning and exploring new horizons in your field. Computer Science Engineers are well-positioned in using technology to solve crucial engineering issues and improve the living conditions of the modern world making things more efficient. Hence, a great opportunity to make a positive impact on the society and environment.

Dr. Syed Ariff Principal

**Dr. T. Thimmaiah
Institute of Technology, KGF**



HOD of CSE Department Message

From the Editor's Team

Dear Readers,

I am delighted to welcome you to the First Issue of "BYTE" Technical Magazine, a student-led publication that showcases the latest developments in the field of Computer Science and Engineering. This magazine is a platform for our students, faculty, and industry partners to share their insights, experiences, and achievements in the field of Computer Science and Engineering. In this issue, you will find articles on topics such as technical publications, student and faculty achievements. You will also learn about some of the exciting projects and activities that our department is involved in, including student competitions and programs. I would like to thank the editorial team for their hard work and dedication in preparing this magazine. I would also like to thank all the authors who contributed their valuable content to this issue. Without their efforts, this magazine would not have been possible. I hope you enjoy reading this magazine and find it informative and inspiring. I look forward to hearing your feedback and suggestions for future issues. Together, we can make this magazine a success and a source of pride for our department and our profession.

Sincerely,

Dr. S Sreedhar Kumar

Head, Department of Computer Science and Engineering

EDITORIAL COMMITTEE

Chief-Editors:



Dr. S Sreedhar Kumar
HOD CSE, Professor



Prof. Hamsalatha
Assitant Professor

Associate Editor:



Prof. Premalatha
Asst. Professor

STUDENTS EDITORIAL



Dharshini R(IGV18CS016)



Ritu Rani B(IGV19CS066)



RubicaRani R(IGV19CS067)

VISION

To produce technically competent engineers having innovative skills positive attitude, leadership and professional ethics, with a focus on developing sustainable and new technology.

MISSION

- Create a conducive environment for teaching, learning and innovation by providing state of the art infrastructure.
- Learn sustainable and new technologies through industry institute collaborations.
- Produce technically competent engineers with ethics, discipline and social consciousness through holistic education.

DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

VISION

“To produce highly competent and innovative Computer Science professionals through excellence in teaching, training and research.”

MISSION

To achieve the vision, the department will

- To provide appropriate infrastructure to impart need-based technical education through effective teaching and research.
- To involve the students in innovative projects on emerging technologies to fulfill the industrial requirements.
- To render leadership skills and ethical responsibilities in students that leads them to become globally competent professionals.

CONTENTS

STUDENTS ACTIVITIES AND THEIR ACHIVEMENT

DEPARTMENT TECHNICAL ACTIVITIES CONDUCTED

TECHNICAL PUBLICATIONS BY THE FACULTIES

OUTREACH PROGRAMS BY THESTUDENTS

CSE NEWS

STUDENTS ACTIVITIES AND THEIR ACHIEVEMENTS

NPTEL COURSES (2021-2022)

1. Dhasrshini –NPTEL Courses
2. Dhanush R-NPTEL Courses
3. The above students had completed many courses offered from the **National Programme on Technology Enhanced Learning**. And have applied for the honors degree from VTU in Computer Science and Engineering.



Elite
NPTEL Online Certification
 (Funded by the MoE, Govt. of India)




This certificate is awarded to
DHARSHINI R
 for successfully completing the course

Data Analytics with Python

with a consolidated score of **75** %

Online Assignments	24.06/25	Proctored Exam	50.5/75
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Total number of candidates certified in this course: **6359**

Prof. Sanjeev Manhas
 Coordinator, Continuing Education Centre
 IIT Roorkee

Jan-Apr 2022
 (12 week course)

Prof. Priti Maheshwari
 NPTEL Coordinator
 IIT Roorkee

Indian Institute of Technology Roorkee

Dr. T. Thimmaiah Institute of Technology
 Coorgaum, K.G.F. - 563 120.

swayam

Roll No: NPTEL22CS08513190024

To validate and check scores: <https://nptel.ac.in/noc>

NPTEL Online Certification
 (Funded by the Ministry of HRD, Govt. of India)




This certificate is awarded to
DHARSHINI R
 for successfully completing the course

Social Networks

with a consolidated score of **52** %

Online Assignments	21.88/25	Proctored Exam	30/75
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Total number of candidates certified in this course: **1343**

Prof. Devendra Jalihal
 Chairman
 Centre for Continuing Education, IITM

Jul-Oct 2021
 (12 week course)

Prof. Andrew Thangaraj
 NPTEL, Coordinator
 IIT Madras

Indian Institute of Technology Madras

Dr. T. Thimmaiah Institute of Technology
 Coorgaum, K.G.F. - 563 120.

swayam

Roll No: NPTEL21CS74513223618

To validate and check scores: <https://nptel.ac.in/noc>

Elite
NPTEL Online Certification
 (Funded by the Ministry of HRD, Govt. of India)




This certificate is awarded to
DHARSHINI R
 for successfully completing the course

Data Science for Engineers

with a consolidated score of **77** %

Online Assignments	21.46/25	Proctored Exam	55.5/75
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Total number of candidates certified in this course: **1160**

Prof. Devendra Jalihal
 Chairman
 Centre for Continuing Education, IITM

Jan-Mar 2021
 (8 week course)

Prof. Andrew Thangaraj
 NPTEL, Coordinator
 IIT Madras

Indian Institute of Technology Madras

Dr. T. Thimmaiah Institute of Technology
 Coorgaum, K.G.F. - 563 120.

swayam

Roll No: NPTEL21CS23511211340

To validate and check scores: <https://nptel.ac.in/noc>



NPTEL Online Certification

(Funded by the Ministry of HRD, Govt. of India)



This certificate is awarded to
DHANUSH N
for successfully completing the course

Social Networks

with a consolidated score of **56** %

Online Assignments	21.88/25	Proctored Exam	34/75
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Total number of candidates certified in this course: **1343**

Devendra Jalihal
Prof. Devendra Jalihal
Chairman
Centre for Continuing Education, IITM

Jul-Oct 2021
(12 week course)

Andrew Thangaraj
Prof. Andrew Thangaraj
NPTEL, Coordinator
IIT Madras

Indian Institute of Technology Madras

Dr. T. Thimmaiah Institute of Technology
Oorgaam, K.G.F. - 563 120

Roll No NPTEL21C574513223518

To validate and check scores: <https://npTEL.ac.in/noc>



Elite NPTEL Online Certification

(Funded by the MoE, Govt. of India)




This certificate is awarded to
DHANUSH N
for successfully completing the course

Intellectual Property

with a consolidated score of **80** %

Online Assignments	24.29/25	Proctored Exam	56.12/75
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Total number of candidates certified in this course: **902**

Devendra Jalihal
Prof. Devendra Jalihal
Chairman
Centre for Continuing Education, IITM

Jan-Apr 2022
(12 week course)

Andrew Thangaraj
Prof. Andrew Thangaraj
NPTEL, Coordinator
IIT Madras

Indian Institute of Technology Madras

Dr. T. Thimmaiah Institute of Technology
Oorgaam, K.G.F. - 563 120

Roll No NPTEL22H559543191191

To validate and check scores: <https://npTEL.ac.in/noc>

DEPARTMENT ACTIVITIES

Industrial Visit

1. Organized one day industrial visit for 2nd, 3rd and 4th years with 200 students and 8 faculty members to BEML, KGF, Karnataka during on 12-12-2021.



Funding Project Details

- Funding Project Proposal with entitled “Artificial Intelligence, Machine Learning Integrated Advanced Internet of Things(IOT)”with budget(Rs. 19.74L) **submitted** to Modrop (AICTE),Government of India on January 2021.
- Funding Project Proposal with entitled “An Improved System for Video Retrieval From Large Video Set Through Image Key Frame Using Improved Machine Learning Concepts “with budget(Rs. 14.50L)**submitted** to VTU Karnataka,Research Grants Scheme 2021.
- Funding Project Proposal with entitled “An Investigation of Effectively Utilizing the Memory Space in Various Systems for Identifying and Ignoring Highly Replicated Images Over the Large Image Set Using Multilevel Improved Unsupervised Clustering Techniques“ with budget (Rs.14.50L) **submitted** to VTU Karnataka, Research Grants Scheme 2021.

Workshops/FDP

1. 4th National Level four-day Webinar on: “Emerging Trends in IT Industry “was conducted from 3rd – 6th August 2020. 4th National Level one-day Webinar on: “CSI chapter inauguration “was conducted on 2nd November – 2020.
2. Department of CSE has organized three days national level virtual workshop for students and faculty – members with entitle “Overview of machine Learning & Artificial Intelligence” in association with CSI Student Branch and IIC Cell of DrTTIT from 11th to 13th November 2020 including two resource persons namely Dr.Andhe Dharani, Professor & Director Dept. Of MCA, RV College of Engineering, Banglore and Dr Vijaya Lakshmi Associate Professor,Dept. Of MCA, RV College of Engineering ,Banglore have presented their respective topics in this workshop.
3. Department of CSE has organized three days national level virtual workshop for students and faculty – members with entitle “Data Structures and Applications” in association with CSI Student Branch and IIC Cell of DrTTIT from 25th to 27th November 2020 including two resource persons namely Prof. Ravi Kumar, Associate Professor, Department of CSE East Point College of Engineering, Bangalore and Prof.Gayathri, Assistant Professor, Department of Mathematics East Point College of Engineering, Bangalore have presented their respective topics in this workshop.
4. “Computing Systems” from 17/05/2021 to 19/05/2021 –
5. “Programming Languages” from 09/05/2021 to 11/05/2021 –
6. “Computer basics” from 20/05/2021 to 22/05/2021 –

TECHNICAL ACHIVEMENTS OF THE FACULTIES

- Dr. S. Sreedhar Kumar HOD, has published a research paper on “Two Phase Cluster Validation→ Approach Towards Measuring Cluster Quality in Unstructured and Structured Numerical Datasets”, in the journal of Ambient Intelligence and Humanized Computing (Springer), Indexed in SCI, Impact Factor: 4.85, Q1 Journal, September 2020.
- Dr.S Sreedhar Kumar,has published his research paper with entitle“Two Phase Cluster Validation Approaches Towards Measuring Cluster Qualityin Unstructured and Structured Numerical Datasets”, Journal of Ambient Intelligence and Humanized Computing(Springer),vol.12,pp.75817594,Indexed in **SCI, Impact Factor:7.04,ISSN:1868-5145,Jan2021.**
- Dr.S Sreedhar Kumar , has published his research paper with entitle “Comparative Study of Feature Extraction Using Different Transform Techniques in Frequency Domain”, Advances in Automation, Signal Processing, Instrumentation and Control, Springer LNEE, vol. 700, pp. 2835-2846,Indexed in **Scopus**, March 2021.
- Dr.SSreedhar Kumar , has presented his research paper with entitle, “An Improved Technique for Identifying Fake News on Social Media Network Using Supervised Machine Learning Concepts”,3rdInternational Conference on Recent Trends in Technology, Engineering and Applied Science(ICRTTEAS-2019),Dr.T ThimmaiahInstituteofTechnology,KGF,19thto 20th July **2021.**
- Dr.S Sreedhar Kumar , has presented his research paper with entitle “Improving Medical Image→ Pixel Quality Using MICQ Unsupervised Machine Learning Technique”, International Conference on Computing, Communications & Cyber Physical System”, Reva University, Bangalore, 18th – 19th November 2021.
- Dr.S Sreedhar Kumar , has presented his research paper with entitle, “An Improved Technique→ for Identifying Fake News on Social Media Network Using Supervised Machine Learning Concepts”, 3rdInternational Conference on Recent Trends in Technology, Engineering and Applied Science (ICRTTEAS-2019), Dr. T Thimmaiah Institute of Technology, KGF, 19th to 20th July 2021.
- Dr.S Sreedhar Kumar , has presented his research paper with entitle, “Human Activity→ Recognition System”, 3rdInternational Conference on Recent Trends in Technology, Engineering and Applied Science (ICRTTEAS-2019), Dr. T Thimmaiah Institute of Technology, KGF, 19th to 20th July 2021.
- Dr.S Sreedhar Kumar , has presented his research paper with entitle, “An Improved Hand Written→ Digits Recognition Using Histogram and Machine Learning Techniques, 3rdInternational Conference on Recent Trends in Technology, Engineering and Applied Science (ICRTTEAS-2019), Dr. T Thimmaiah Institute of Technology, KGF, 19th to 20th July 2021.
- Dr. S Sreedhar Kumar , has presented his research paper with entitle, “An Enhanced Approach of→ Identifying Distinct Clusters Over the Color Image Using Agglomerative Clustering Technique”, 3rdInternational Conference on Recent Trends in Technology, Engineering and Applied Science (ICRTTEAS-2019), Dr. T Thimmaiah Institute of Technology, KGF, 19th to 20th July 2021.
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- Dr.S Sreedhar Kumar , has presented his research paper with entitle, “An Improved Hand Written Digits Recognition Using His to gram and Machine Learning Techniques,3rd International Conference on Recent Trends in Technology, Engineering and Applied Science (ICRTTEAS-2019),Dr.TThimmaiah Institute of Technology,KGF,19th to 20th July 2021.
- Dr. S Sreedhar Kumar , has presented his research paper with entitle, “An Enhanced Approach of Identifying Distinct Clusters Over the Color Image Using Agglomerative Clustering Technique”,3rdInternational Conference on Recent Trends in Technology, Engineering and Applied Science(ICRTTEAS-2019),Dr.T Thimmaiah Institute of Technology,KGF,19th to 20th July 2021.
- Dr. S Sreedhar Kumar , has Won the Best Paper Excellence Award @ 3rd International→ Conference on Recent Trends in Technology Engineering and Applied Science (ICRTTEAS2021)with entitle of “An Improved Technique for Identifying Fake News on Social Media Network Using Supervised Machine Learning Concepts”, Organized by Dr T Thimmaiah Institute of Technology, KGF, and 19th-20th July 2021.
- Prof.Shalini G has completed NPTEL course on “Cloud computing and Distributed Systems” and hassecuredElitecertification.
- All faculty members participated in various roles in International conference on Recent Trends in Technology, Engineering and Applied Science- ICRTTEAS 2021 held virtually on 19thand 20thJuly2021.
- Prof.ManjunathSinghHpresentedawebinaron“Featuresandsignificanceofserversideprograms”inDr.TTITLect ureseries 2021on17thJune.
- Prof.PunithaF.presentedawebinaron“ADASAAdvancedDriverAssistanceSystems”inDr.TTITLectureseries 2021on24thJune.
- Prof.TharaDeviM.presentedawebinaron“ImportanceofGraphDataStructures”inDr.TTITLectureseries 2021on8thJuly.
- Dr.S Sreedhar Kumar,has Won the Best **Paper Excellence Award**@ 3rd International Conference on Recent Trends in Technology Engineering and Applied Science(ICRTTEAS-2021)with entitle of “**An Improved Technique for Identifying Fake News on Social Media Network Using Supervised Machine Learning Concepts**”,Organized by Dr TThimmaiah Institute of Technology, KGF,and 19th-20th July 2021.
- Dr.S Sreedhar Kumar , has Won the Best Paper Excellence Award @ 3rd International→ Conference on Recent Trends in Technology Engineering and Applied Science (ICRTTEAS2021)with entitle of “An Improved Technique for Identifying Fake News on Social Media Network Using Supervised Machine Learning Concepts”, Organized by Dr T Thimmaiah Institute of Technology, KGF, and 19th-20th July 2021.
- Prof.Shalini G. has completed NPTEL course on “Cloud computing and Distributed Systems” and→ has secured Elite certification. All faculty members participated in various roles in International conference on Recent Trends→ in Technology, Engineering and Applied Science- ICRTTEAS 2021 held virtually on 19th and 20th July 2021.
- Prof.Manjunath Singh H presented a webinar on “Features and significance of server side→ programs” in Dr.TTIT Lecture series 2021 on 17th June.

- Prof.Punitha F. presented a webinar on “ADAS – Advanced Driver Assistance Systems” in Dr.TTIT→ Lecture series 2021 on 24thJune.
- Prof.Thara Devi M. presented a webinar on “Importance of Graph Data Structures” in Dr.TTIT→ Lecture series 2021 on 8th July.



OUTREACH PROGRAMS

- One day industrial visit for 2nd, 3rd and 4th years with 200 students and 8 faculty members to BEML, KGF, Karnataka



CSE NEWS

- Computer science is constantly evolving. Get a glimpse at the latest trends in AI, cybersecurity, bioinformatics, and other developing areas of the field.

PROGRAM EDUCATIONAL OBJECTIVES(PEOs) & PROGRAM SPECIFIC OUTCOMES (PSOs)

PEO 1: To succeed in computing industry through effective analysis, design and development skills.

PEO 2: To Acquire new skills to work in multidisciplinary areas with strong focus on innovation and entrepreneurship.

PEO 3: To collaborate as team members and team leaders with ethics and good communication skills.

PSO1:To design and apply standard practices and strategies in software project development to solve real world problem.

PSO2:To adapt to the future technology,to fill the research gap and become entrepreneurs.

PROGRAM OUTCOMES (POs)

At the end of the B.E program, students are expected to have developed the following outcomes:
Engineering Knowledge: Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialisation to the solution of complex engineering problems.

1. Engineering Knowledge: Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialisation to the solution of complex engineering problems.
2. Problem analysis: Identify, formulate, research literature, and analyse complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.
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.
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.
5. Modern Tool Usage: Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modelling to complex engineering activities with an understanding of the limitations.
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.
7. Environment and Sustainability: Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of need for sustainable development.
8. Ethics: Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.
9. Individual and Team Work: Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.
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.
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.
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.



Dr. T. THIMMAIAH INSTITUTE OF TECHNOLOGY

GOLDEN VALLEY EDUCATIONAL TRUST

KNOWLEDGE IS POWER

OORGAUM, K.G.F

సాక్షాత్ కర్మ