

# Department of Information Technology

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About GMRIT

Newsletter Issue-4

[www.gmr.it.org](http://www.gmr.it.org)

GMR Institute of Technology is situated at Rajam, a small industrial town about 100 KMs from the 'city of destiny', Visakhapatnam in Andhra Pradesh. The campus of the institute is spread over sprawling 117 acres of land. The lush sylvan and idyllic surroundings at the heart of the agricultural belt, offer an ideal setting for higher studies. The institute is affiliated to the Jawaharlal Nehru Technological University, Kakinada and is approved by AICTE New Delhi. The institute has been accredited NAAC – 'A' grade of UGC. The institution is also having ISO 9001:2008 Quality Systems. The department of IT has been accredited by National Board of accreditation (NBA). GMRIT offers 4-year B.Tech. Programs in seven core disciplines, 2-year M. Tech programs in six specializations. The approved annual intake of the institute is 1038 students. The institution received the grant extension of autonomous status for a period of ten years w.e.f 2018-19 to 2027-2028.

## About IT Department

### Vision

To be a preferred department of learning for students and teachers alike, with dual commitment to academics and research, serving students in an atmosphere of innovation and critical thinking.

### Mission

To provide adoptable education for the graduates in preparing them for a rewarding career to develop academic and research in collaboration with industry and other institutions in the field of Information Technology. **(M1)**

To prepare the students as thinking professionals and good citizens who will be able to apply their knowledge critically and innovatively in solving professional and social problems. **(M2)**

### Overview

GMRIT's Information Technology Department was formed in 1999 and covers the technical attributes of

IT, its multiple applications and the appropriate management of IT resources. Courses especially focus on the application of IT in various information and administrative systems. The annual intake of this Department is 120 students.

### Facilities & Infrastructure

Three state-of-the-art laboratories - Interactive, Networking, & Unix Labs.

- Over 170 high configuration branded (HP) systems and two Intel Xeon dual processor servers.
- 1 GBPS Bandwidth Internet connectivity from BSNL & Airtel through dedicated leased lines.
- Video conferencing, Digital library, e-journals, e-learning & e-book facilities through INDEST (Indian National Digital Library in Engineering, Science & Technology) membership.
- CTLP and Video Courses on LAN.
- LAN connectivity through OFC, Wireless & Intranet.
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### Major Courses Offered

- Data Structures
- Computer Networks
- Computer Organization
- Object Oriented Programming through Java
- Operating Systems
- Data Base Management System

- Middleware Technologies
- Software Engineering
- Information Security
- Object Oriented Analysis and Design
- Cloud Computing
- Distributed Databases
- Human Computer Interaction
- Design and Analysis of Algorithms
- Web technologies
- Network Programming
- Data Warehouse & Data Mining
- Data Analytics

### Academic Achievements

#### Papers Published in Conferences

1. Karrothu, A., et al. published a paper on "A Two-Factor Authenticated and Secure Credit Card System for E-Platforms". Conference: *2nd International Conference on Advancement in Computation & Computer Technologies (2024-may. InCACCT)*, (pp. 871-874). IEEE. Retrieved from DOI: <https://doi.org/10.1109/InCACCT61598.2024.10551037>.
2. Hari Krishna M., et al. published a paper on "Deep Learning Model-Based Approach for DDoS Detection and Classification". conference: *The International Conference on Recent Innovations in Computing (2023, October)*.

- In (pp. 129-150). Singapore: Springer Nature Singapore. Retrieved from DOI: [https://doi.org/10.1007/978-981-97-2839-8\\_10](https://doi.org/10.1007/978-981-97-2839-8_10).
3. Rout, A. K., et al. published a paper on "Identification and Mitigation Process for the Air Quality Using Machine Learning Techniques". Conference: *International conference on smart computing and cyber security: strategic foresight, security challenges and innovation* (2023, December). In (pp. 281-293). Singapore: Springer Nature Singapore. Retrieved from DOI: [https://doi.org/10.1007/978-981-97-0573-3\\_23](https://doi.org/10.1007/978-981-97-0573-3_23).
  4. Panapana, P., et al. published a paper on "Multi-player Gaming Application Based on Human Body Gesture Control". In *International Conference on Intelligent Systems Design and Applications* (2023, December). (pp. 1-30). Cham: Springer Nature Switzerland. Retrieved from DOI: [https://doi.org/10.1007/978-3-031-64847-2\\_1](https://doi.org/10.1007/978-3-031-64847-2_1).
  5. Anilkumar, C., et al. published a paper on "A Wavelet Transformation Technique and Cryptographic Encryption for Image Steganography". conference: *International conference on smart computing and cyber security: strategic foresight, security challenges and innovation* (2023, December) . In (pp. 333-344). Singapore: Springer Nature Singapore. Retrieved from DOI: [https://doi.org/10.1007/978-981-97-0573-3\\_27](https://doi.org/10.1007/978-981-97-0573-3_27).
  6. Archana, U., et al., published a paper on "An Analysis of Identification of Plant Leaf Diseases and Classification Using Machine Learning and Computer Vision" . Conference: *International conference on smart computing and cyber security: strategic foresight, security challenges and innovation* (2023, December). In (pp. 399-410). Singapore: Springer Nature Singapore. Retrieved from DOI: [https://doi.org/10.1007/978-981-97-0573-3\\_32](https://doi.org/10.1007/978-981-97-0573-3_32).
  7. Rout, A. K., et al., published a paper on "Book Genre Classification System Through Supervised Learning Technique" conference: *International conference on smart computing and cyber security: strategic foresight, security challenges and innovation* (2023, December). In (pp. 233-245). Singapore: Springer Nature Singapore. Retrieved from DOI: [https://doi.org/10.1007/978-981-97-0573-3\\_19](https://doi.org/10.1007/978-981-97-0573-3_19).
  8. Rout, A. K., et al., published a paper on " Predicting Disease Risk with Machine Learning: A Comparative Study of Classification Algorithms" conference: *International Conference on Advances in Modern Age Technologies for Health and Engineering Science (AMATHE)* (2024, May). In (pp. 1-7). Retrieved from DOI: 10.1109/AMATHE61652.2024.10582244.

9. Vaddadi, V. R. et al., published a paper on “A Handwriting Recognition System That Outputs Editable Text And Audio” conference:

*International Conference on Advances in Modern Age Technologies for Health and Engineering Science (AMATHE)* (2024, May).

In (pp. 1-7). IEEE. Retrieved from DOI: 10.1109/AMATHE61652.2024.10582076.

10. Ramya, V., et al., published a paper on “Segmentation of Neural Cells by Instance Using Deep Learning Methods” conference:

*International Conference on Advances in Modern Age Technologies for Health and Engineering Science (AMATHE)* (2024, May).

In (pp. 1-6). IEEE. Retrieved from DOI: <https://doi.org/10.1109/AMATHE61652.2024.10582185>.

11. Choudhary, A. K. et al., published a paper on “The design of an efficient bioinspired CNN model for automated malaria detection in

blood smear images” conference: *AIP Conference Proceedings* (Vol. 3111, No. 1) (2024, July). AIP Publishing. Retrieved from

DOI: <https://doi.org/10.1063/5.0221423>.

12. Kishore, A. R., et al., published a paper on “Design of an efficient VARMAx model to leverage in-memory computing for faster big data analytics”. Conference: In *AIP Conference Proceedings* (Vol. 3111, No. 1). AIP Publishing. (2024, July). Retrieved from

<https://doi.org/10.1063/5.0221421>.

## Papers Published in Journals

1. Kotti, J., published a paper on “Recurrent Shephard convolutional neural network for heart disease prediction in spark framework”. Journal: *International Journal of Ad Hoc and Ubiquitous Computing*, 46(4), 216-230. (2024). Retrieved from <https://doi.org/10.1504/IJAHUC.2024.140443>. (Q3, impact factor SJR(2023):0.27).

## Patents

1. Ms. Archana Uriti published a patent titled on “EFFICIENT DATA INGESTION AND PROCESSING FRAMEWORK FOR REAL-TIME BIG DATA ANALYTICS IN THE CLOUD ” . Application no: .202441002049 A . date of filing: 11/01/2024, publication date: 16/2/2024.

## Online Courses

1. Mrs. P. Padmavathi successfully completed and received a passing grade in “Guided Project: Get Started with MongoDB CRUD Operations” a course of study offered by IBM, an online learning initiative of IBM. Verified Certificate Issued June 23, 2024.
2. Mrs. P. Padmavathi successfully completed and received a passing grade in “Django Application Development with SQL and Databases” a course of study offered by IBM, an online learning initiative of IBM.

## Webinars and Faculty Development Programs

1. M. Hari Krishna, P. Padmavathi, K. Santhoshi, L. Swathi, B. Padmaja, V. Ramya, P. Pooja, Ch. Bharathi and G. Sri Rupa are Attended an FDP on “**Classroom Deliverables, Question Paper Setting and Assessment**” from 22<sup>nd</sup> -july-2024 to 26<sup>th</sup> -july-2024. Organized by IQAC, GMR Institute of Technology, Rajam, Andhra Pradesh.
2. Dr. Aravind Karrothu Attended an FDP on “**Generative AI Models and Applications of Machine Learning**” from 21<sup>st</sup> -july-2024 to 25<sup>th</sup>-july-2024. Organized by the Department of Computer Science and Engineering at Shri Vishnu Engineering College for Women(A).
3. Mr. A. Ravi Kishore for participating in the training Program on “**Artificial Intelligence & Machine Learning**” conducted by Talent Next from 22<sup>nd</sup> July to 26<sup>th</sup> July 2024.

## Book Chapters

1. Mrs. Jayasri Kotti et.al. published a book chapter on Machine Learning-Based Inconsistency Detection in Medical Data. In Smart Technologies in Healthcare Management (pp. 15-25). CRC Press. **eBook ISBN 9781003330523**.
2. Rout, A.K et.al. published a book chapter on “Identification and Mitigation Process for the Air Quality Using Machine Learning

Techniques” Proceedings of 3rd International Conference on Smart Computing and Cyber Security. SMARTCYBER 2023. Lecture Notes in Networks and Systems, vol 914. Springer, Singapore. retrieved from [https://doi.org/10.1007/978-981-97-0573-3\\_23](https://doi.org/10.1007/978-981-97-0573-3_23).

## Webinars and Faculty Development Programs

1. V. Nirmala Priya(20341A12C2) selected for group ADP with 35 LPA in Paris.
2. V. Gowtham Sai (20341A12B8) selected for TCS NQT-Prime with 9 LPA.
3. M. Hema Kalyan (20341A1274), M. Madhuri (20341A1267), Rajasekhar (20341A1248),
4. N. Sri Mouli (20341A1277), R. Pavan Raj (20341A1295) Selected in TCS NQT-digital with 7 LPA.