About the Institutes

GMRIT: GMR Institute of Technology (GMRIT) was established in the year 1997 by GMR Varalakshmi Foundation – the corporate social responsibility arm of GMR Group. GMRIT offers aspiring engineers' high quality technical education. It is currently placed among the top 50 colleges in the country and among the top 5 colleges in the state of Andhra Pradesh. GMRIT provides its learning community state-of-the-art facilities, infrastructure, and a competent faculty. The Institute encourages collaborative learning between industry and academia as a means of reinforcing its curriculum with practical and real-world experiences. It offers Eight UG and Five PG programs. All B.Tech programs are accredited by NBA under Tier-1 complying with Washington Accord and the college is accredited as an 'A' grade institution by NAAC for the three consecutive cycles. In the NIRF-ranking GMRIT was placed in the band of 201-300 for the year 2024.

Andhra University College of Engineering (AUCE) had been established in 1955 on a sprawling area extending to 160 acres. The Campus offers 17 UG and 35 PG programmes besides research on par with technical institutions worldwide. The strength of the college is its faculty who motivate the students in leading the country in its ongoing technological revolution and entrepreneurial skills. The college was supported by Technical Education Quality Improvement Programme (TEQIP), a World Bank funded project to develop technical education in the country. The faculties of the departments are engaged in individual research besides consultancies with public and private and national research with organizations.

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Quantum Computing in Artificial Intelligence and Machine Learning Using Qiskit

3rd to 7th March 2025

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About the Departments

The Department of Artificial Intelligence and Machine Learning (AI&ML) is at the forefront of cutting-edge research and innovation in the fields of AI, Machine Learning, and data-driven technologies. Our mission is to empower students with the knowledge and skills required to tackle the most complex challenges in these rapidly evolving fields. The department have highly competent faculty with 100+ Scopus & SCI indexed publications and the research areas includes AI-driven healthcare, intelligent transportation systems, smart cities, Natural Language Processing, Robotics and Autonomous Systems and predictive analytics. The department maintains strong ties with leading tech companies, research institutions, and startups in the AI space.

The Department of Information Technology and Computer Applications at Andhra University was formed in the academic year (2018-2019). The Department has designed a curriculum to apply concepts of Information Technology in collaboration with various inter disciplinary areas. The aim is to create IT professionals with good knowledge on core computer science subjects and skills meeting the current needs of the industry. The department has good infrastructure, computing equipment and laboratories. The faculty of the department have rich teaching and research experience. The students are admitted through a state level common entrance examination. Even though it is a young department, students are well placed in reputed software companies and department is very active in organizing workshops, seminars and training programs. The programs offered in the department meet requirements of both the industry and academia.

About the FDP

This Faculty Development Program provides an opportunity to explore the basics of Quantum Computing, Quantum Algorithms, Mathematical Essentials and Models of Quantum Computation, various Quantum Algorithms and its importance in different Machine Learning and Deep Learning applications. The participants are expected to learn, implement and demonstrate experiments with the focused techniques. The principal objective is to familiarize the participants to emphasize the importance of Quantum Computing, to enable the participants to understand the basics of Quantum Computing explore Advanced Quantum algorithms for AI & ML applications and to enable the participants to solve the industry based problems related to Quantum Computing. At the end of this FDP, all the participants will be able to gain Knowledge on applying Quantum Computing algorithms for their Research purpose.

Topics Covered

- Quantum Computing Fundamentals: Understanding qubits and principles like superposition and entanglement.
- Quantum Algorithms and its Importance to solve problems more efficiently than classical algorithms, impacting cryptography, optimization, and data analysis.
- Quantum Neural Network: replacing qubits and quantum circuits instead of traditional neurons, offering potential speedups in pattern recognition and complex problem-solving.
- IOT: from Classical Computing to Quantum Computing.
- Exploring Quantum Circuits, Quantum Cryptography and Post Quantum Computing using Qiskit in python.

Contact Persons

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Eligibility

All interested Faculty, Research Scholars, PG Students, and Industry Personnel

Registration Details

Faculty, Research Scholars, PG Students : Rs. 300/-
Industry Participants : Rs. 500/-

Bank Account Details for Payment

Account Name	:	Indian society of Technical Education GMRIT Chapter
Account number	:	183610100011155
Bank Name	:	Union Bank of India
IFSC Code	:	UBIN0804665
Branch	:	GMR Nagar, Rajam

(Please upload payment receipt copy along with the UTR number while doing registration)

Registration Link

https://forms.gle/a7Cqx2ysbQv6hvqr7

Certificate

The link for the different sessions will be emailed to the registered participants. The certificate will be issued for those participants who have attended the program with minimum 80% attendance.