Resource Persons

- Dr Suprava Patnaik received her PhD from IIT, Kharagpur, in 2004. She is a Professor and Dean in the School of Electronics, KIIT, Bhubaneswar. Her research interests include Machine Learning, Computer Vision, Audio Processing and Biomedical Signal Processing.
- Dr Manimala Mahato, received her PhD from IIT Bombay. She is an Associate Professor, Department of Computer Engineering, Shah and Anchor Kutchhi Engineering College. Her research interests include Natural Language Processing, Image Processing, and Multi-objective Optimization.
- Dr Ujwala Bharambe received her PhD from IIT, Bombay. She is an Assistant Professor, Department of Computer Engineering, Thadomal Shahani Engineering College. Her research interests include Artificial Intelligence, Knowledge Representation, Natural Language Processing, Information Retrieval and Web Mining.
- Dr Prakash Andugula, Research Consultant at IIT Bombay received his PhD degree from IIT, Bombay. Presently he working as a free-lance research consultant. His research interests are in Machine Learning, Geo-spatial Technologies, Spatial Modelling and Domain Adaptation.
- Dr Ekta Patil, MDS (pursuing), Yog Shikshak, recognised by the Director, Department of AYUSH, Government of Maharashtra.
- Dr Jaychand Upadhyay, Prof. Chhaya Dhawale, Prof. Lalita Moharkar, and Fr Fabian Barreto SJ, are faculty members at XIE. Their research domains are Machine Learning, Deep Learning and Artificial Intelligence.
- Mr Himanshu Gharat, is a Business Analyst at Quantiphi. His research interest includes AI/ML use cases and ensuring delivery to clients.
- Ms Purva Hambire, Mr Steve D'souza, Mr Yash Sanaye and Banjrang Londe, graduated from XIE, and their research interests are in Generative Adversarial Networks.

STTP Application Process

Faculty from any Department can apply for the workshop. The STTP is limited to 40 seats on a first-come first-serve basis. Before you apply, please make sure that you have access to a laptop or PC to participate in the hands-on session.

Registration Fee

Faculty registration fees: Rs 700/−

Registration Details

Registration Form

`https://forms.gle/NmUzQvYfr16M8PTJ7`

Contact:

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Prof. Manali Tayade,

Asst. Prof., EXTC

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Certification

ISTE will issue participation certificates after meeting the attendance requirement and successful completion of quizzes.

Important Dates

Last date to apply	30^{th} June 2023
Intimation of selection	1^{st} July 2023
STTP	3^{rd} - 8^{th} July 2023

ISTE Approved
Six-Day Online
Short Term Training Program

on

Generative Artificial Intelligence & Its Applications

(3^{rd} - 8^{th} July 2023)

organised by

Xavier Institute of Engineering

Department of Electronics and Telecommunication Engineering

STTP Convener:
Prof. Nitin Ahire
(Head of the Department, EXTC)

STTP Coordinators:
Prof. Shailaja Udtewar,
(Assistant Professor, EXTC)
Prof. Manali Tayade,
(Assistant Professor, EXTC)

About the Institute

Xavier Institute of Engineering (XIE), a sister-Institute of St Xavier's College, Fort, Mumbai is a part of an International Network of Jesuit Educational Institutions which includes about 200 Universities/Colleges and 3400 Educational Institutions in 120 countries. Jesuit Educational Institutions strive for a holistic and integral formation of its students, fostering in them a spirit of academic excellence, social concern, and character formation, shaping them to become "men and women for others."

XIE has been adjudged as 57^{th} Best Institute in the Country, 18^{th} best in the Western Region and 50^{th} best among the top Private Engineering Colleges in the country by the Times All India Engineering Institutes Ranking Survey 2022. XIE is NAAC accredited and the only college to have a GAIT laboratory, sponsored by Marquette University, USA.

For more details, visit `http://www.xavier.ac.in`

Vision of the Institute

To nurture the joy of excellence in a world of high technology

Mission of the Institute

To strive to match global standards in technical education by interaction with industry, continuous staff training and development of quality of life

Chief Patrons

Fr Anil Pereira, S.J., Chairman, XIE
Fr Dr John Rose, S.J., Director, XIE

Patron

Dr Y. D. Venkatesh, Principal, XIE

About the Department

Electronics and Telecommunication Engineering (EXTC) Department of XIE began in 2005 with Under Graduate (UG) BE program for 60 students. The Department is accredited by National Board of Accreditation (NBA). It has a good record of organizing seminars, workshops, and symposia in emerging technological areas. It emphasizes holistic learning by providing quality education, training and empowering students to make significant contributions in their domain under the guidance of trained and experienced faculty members in well-equipped laboratories.

Vision of the Department

To nurture the joy of excellence in the world of Electronics and Telecommunication

Mission of the Department

M1. To equip the students with strong foundations to enable them for higher studies and lifelong learning.
M2. To educate the students with state-of-the-art technologies to meet challenges in the Electronics and Telecommunication domain.
M3. To collaborate and associate with highly reputed Institutes from India and abroad to enhance professional excellence.
M4. To impart total quality education for developing innovative, entrepreneurial and ethical professionals, to fit a globally competitive environment.
M5. To strengthen the soft skills and logical thinking of the students through co-curricular and extracurricular activities.

About the Workshop

Generative Artificial Intelligence (GAI) describes algorithms and architectures that can be used to create new content, including audio, code, images, text, simulations, and videos. Unlike traditional models that are primarily designed for classification or regression tasks, generative models aim to capture the underlying distribution of a dataset and generate new samples that resemble the training data. StyleGAN from NVIDIA, is able to create hyper-realistic images of human faces. GPT-4, the language model from OpenAI, is able to clear aptitude exams, understand complex tasks, recognize context and nuance,and accepts images and texts as input. Indeed, the GAI tools like ChatGPT and DALL-E (a tool for AI-generated art) have the potential to change how a range of jobs are performed.

The following topics will be covered in the STTP:

- Introduction to and overview of the different types of Generative AI models
- Variational Autoencoders (VAE), their architecture and applications
- Generative Adversarial Networks (GAN) and their applications
- Natural Language Processing (NLP) and its applications
- Generative Large Language Models (LLM)
- Advanced topics in Generative Artificial Intelligence