



# VIT<sup>®</sup>

## Vellore Institute of Technology

(Deemed to be University under section 3 of UGC Act, 1956)

### One Day National Workshop On

### Next-Gen Vision AI Bootcamp: Image Analysis, Vision Models & Generative Video



**Organized by**

**School of Computer Science Engineering &  
Information Systems, VIT, Vellore**

**Date: 12-12-2025**

**Time: 10:00 AM To 5:00 PM**

**Venue: SJT 806, VIT, Vellore**



### ABOUT VIT UNIVERSITY

VIT has made a mark in the field of higher education in India, imparting quality education in a multicultural ambience, tangled with extensive application-oriented research. VIT was established with the aim of providing quality higher education on par with institutions of global standards. It persistently seeks and adopts innovative methods to improve the quality of higher education in all fields of science and technology. VIT was established by the honorable Dr. G. Viswanathan, the founder and Chancellor, a visionary who transformed VIT into a center of excellence in higher technical education.



### RANKING AND ACCREDITATION

- VIT has emerged as one of the best institutes in India and is aspiring to become a global leader. Quality in teaching-learning, research and innovation make VIT unique.
- Engineering and Technology: 142<sup>nd</sup> in the World and 9<sup>th</sup> in India (QS World University Rankings by Subject 2025)
- Data Science and AI subject areas are within the Top 100 in the world. Computer Science, Information Systems, Electrical, Electronics, Material Science subject areas are within the top 200 in the world (QS World University Rankings by Subject 2025)
- Within the top 2 in India and top 600 in the world (Shanghai ARWU ranking 2025)
- NAAC Accreditation with A++ grade (3.66 out of 4)
- Within the top 20 in University, Research and Engineering categories in India (NIRF Ranking, Govt. of India 2025)
- 396<sup>th</sup> in the world and 8<sup>th</sup> in India (QS World University Rankings : Sustainability 2025)



### ABOUT SCORE

The School of Computer Science Engineering and Information Systems (SCORE) emphasizes the fields of Information Technology, Software Engineering and Domain Specific Applications to facilitate the evolution of skills in students to help them to attain a higher degree of knowledge, global competency, and excellence, for the betterment of the society. According to the subject positioning by QS, Computer Science and Information Systems secured 142<sup>nd</sup> rank in the globe. This school offers B.Tech. courses in IT, CSE (AI & DE), CSE (Cyber Security), M.Tech. (2 years) course in CSE (Cyber security), M.Tech. (5 years Integrated course) in SE, M.Sc. (2 years) course in AI & ML, B.Sc. in CS, BCA & MCA in Computer Applications and Doctorate of Philosophy programmes.

The school's major research areas include Artificial Intelligence, Big Data, Cloud Computing, Data Mining, Image Processing, Cyber Security, Intelligent Systems, IoT, Machine Learning, and Software Engineering. With committed faculty, visiting professors, and industry professionals, the school emphasizes holistic learning to prepare students for industry and societal contributions. Students gain real-world problem-solving and research experience, supported by strong industry linkages, industry-backed laboratories, and consistently remarkable placement records.



### ABOUT THE WORKSHOP

This workshop offers a complete introduction to image processing and deep learning for computer vision. Digital image processing begins with understanding color spaces, which help interpret and manipulate visual information while enabling creative drawing and annotations through OpenCV. Transformational techniques like filters, gradients, and edge detection further enhance images by reducing noise, highlighting details, and identifying object boundaries using methods. Building on these foundations, computer vision systems detect meaningful features, from simple corners and edges using algorithms like Harris and SIFT to complex tasks like face detection and recognition using Haar Cascades and deep learning models. Advancing into modern multimedia, Generative AI integrates text-to-speech (TTS) and lip-sync technologies to create realistic talking videos, aligning synthesized speech with facial movements using tools like Wav2Lip and TTS models, ultimately connecting low-level image processing with high-level AI-driven content creation. Participants will also gain hands-on experience with Python programming for computer vision and learn to implement advanced models for real-time applications. By the end, attendees will be equipped with both theoretical knowledge and practical skills to apply modern vision techniques to real-world problems.

## TOPICS TO BE COVERED

| Sessions                                                              | Expert Details                                                           | Time                |
|-----------------------------------------------------------------------|--------------------------------------------------------------------------|---------------------|
| Digital Images: Color Spaces and Creative Drawing                     | Dr. V Ajantha Devi,<br>Research Head, AP3 Solutions, Chennai, Tamil Nadu | 10.00 AM – 11.15 AM |
| Transforming Images: Filters, Gradients & Edge Detection              |                                                                          | 11.45 AM – 01.00 PM |
| From Corners to Faces: Feature Detection to Face Recognition          |                                                                          | 02.00 PM – 03.15 PM |
| Create Talking Videos with GenAI: Text-to-Speech & Lip-Sync in Action |                                                                          | 03.45 PM – 05.00 PM |



## TARGET AUDIENCE

Undergraduate Students pursuing degrees in Computer Science, Engineering, Data Science, AI & ML or related fields, interested in exploring real-time applications in Computer vision. Postgraduate Students in Data Science, IT, Engineering, or related disciplines, looking to enhance their skills in real-time computer vision and its applications. PhD Candidates focusing on data-driven research, who want to deepen their knowledge of advanced computer vision and deep learning techniques and real-time applications.



## REGISTRATION FEE

Rs. 500/- (inclusive of GST)

Registration link: <https://events.vit.ac.in/>

## PATRON

**Dr. G. Viswanathan, Chancellor**

## CO-PATRONS

Mr. Sankar Viswanathan, Vice President  
Dr. Sekar Viswanathan, Vice President  
Dr. G. V. Selvam, Vice President  
Dr. V. S. Kanchana Bhaaskaran, Vice Chancellor  
Dr. Partha Sharathi Mallick, Pro-Vice Chancellor

## CONVENER

**Dr. Daphne Lopez, Professor (HAG) & Dean**

## CO-CONVENERS

Dr. Arivuselvan K, Associate Professor & Head  
Department of Information Technology  
Dr. Iyapparaja M, Professor & Head  
Department of Smart Computing  
Dr. Thanapal P, Professor & Head  
Department of Software and Systems Engineering  
Dr. Vijayan E, Professor & Head  
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## COORDINATORS



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