Resource Persons

Mr. Vidhya Shankhar

Senior Principal Engineer at Cadence Design Systems, Bengaluru.

Mr. Ravi Kiran

Associate Director: Data/AI at Winwire Technologies, Bengaluru.

Topics to be Covered

- Introduction to PyTorch and Neural Networks
- Backpropagation, Optimizers and Hyperparameter tuning
- Image classification using VGG16
- Advanced CNN architecture - RESNET
- Instance Segmentation architecture - RCNN
- Vision Transformers and use cases

Registration Process

- Participants are requested to register for the FDP through the following web link.

  https://events.vit.ac.in/

- Certificate will be issued to all active participants.

Registration Fees (Including GST)

- External Faculty* Rs. 1500
- Internal Research Scholars Rs. 1250

Important Dates

Last date for registration 5th January 2024

*Participants are responsible for their food and accommodation

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Head, Department of IoT, SCOPE, VIT, Vellore

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VIT®
Vellore Institute of Technology
(Deemed to be University under section 3 of UGC Act, 1956)

3-Day Faculty Development Program

on

Data Science for Computer Vision

09-11, January 2024

Organized by

School of Computer Science and Engineering (SCOPE)
Vellore Institute of Technology
Vellore –632014

About the Institution

VIT was established with the aim of providing quality higher education on par with international standards. It persistently seeks and adopts innovative methods to improve the quality of higher education on a consistent basis. The campus has a cosmopolitan atmosphere with students from all corners of the globe. Experienced and learned teachers are strongly encouraged to nurture the students. The global standards set at VIT in the field of teaching and research spur us on in our relentless pursuit of excellence.

About SCOPE

The mission of SCOPE is to strive persistently for achieving excellence in computing disciplines. It is being pursued through its spectrum of academic programmes in computing of contemporary standards. The main aim is to produce computing graduates with potential, to design and develop systems involving the integration of software and hardware devices, employ innovative approaches in programming and problem solving, create Large Scale Software Systems and build data/computing infrastructure for an organization.

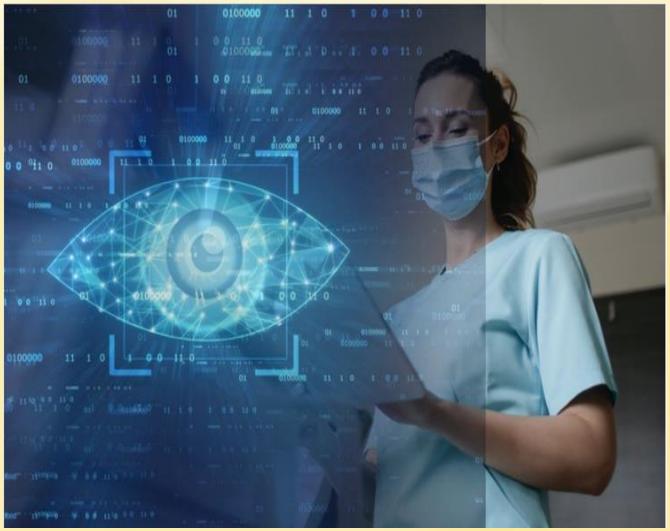
About FDP- Data Science for Computer Vision

Data science and Digital image processing have emerged as critical components of computer vision, revolutionizing the field by providing powerful tools and methodologies for extracting valuable insights from visual data. This integration has opened up new horizons in healthcare, enabling doctors to leverage data science tools and machine learning algorithms for enhanced disease detection and monitoring. One of the profound impacts of this synergy is in the early diagnosis and tracking of prevalent medical conditions such as cardiac or respiratory diseases.

By analyzing vast datasets of medical images, these algorithms can identify subtle patterns and anomalies that might go unnoticed by the human eye. This early detection can lead to timely intervention and improved patient outcomes. Fundamentally, the image processing system treats all images as two-dimensional signals, applying predefined signal processing methods. This mathematical approach allows for precise manipulation and analysis of visual data.

By treating medical images as signals, digital image processing techniques can uncover hidden information, detect structural changes, improve information, detect structural changes, and improve the overall quality of medical diagnosis and treatment planning.

The comprehension of the same entails a significant potential to expand on these areas and utilize the benefits associated with the same. The FDP- Data Science for Computer Vision program covers a plethora of the up and coming fields in the aforementioned aspects including neural network architecture, PyTorch, backpropagation, optimizers, hyper parameters, advanced CNN architectures, object detection, and melange of other salient aspects of note.



This academic reconnaissance aims to provide a base for instilling the fundamentals and the push for innovation in computer vision with data science.