

## Summer School Computer Vision for Live Object Detection Using Open source Tools

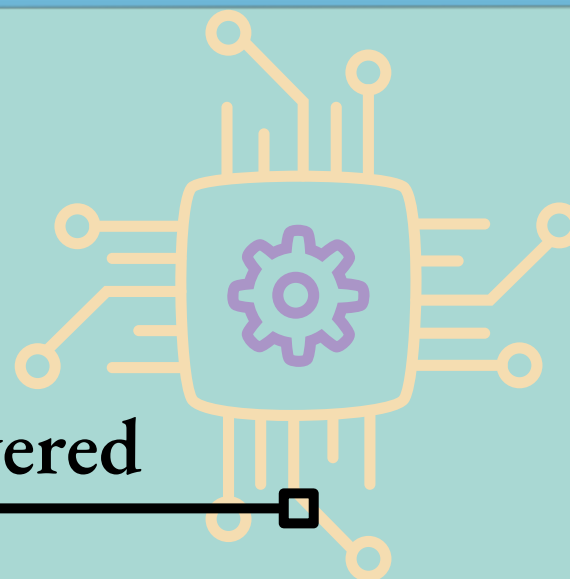
(Under the KARYASHALA Scheme-A SERB initiative)

June 20 -July 2,2022

Website :<https://sites.google.com/view/karayashaluniversityofjammu/home?authuser=1>

Software and Tools to be Covered:

Python with TensorFlow/OpenCV and Intel OpenVino and SCILAB



### Objectives

- To Aware the Researchers about Various Image Processing Tools .
- To Train the Researcher and Student on Various Image Processing Tools for working on Real world problem .
- To Train the Researcher on Various AI approaches for creating Supervised and Unsupervised Model .
- To encourage Participants for Writing Research Proposal based on role of AI in Healthcare and Climate Dynamics .
- To Communicate/Publish in high impact factor Journals [SCI/SCIE] .

### Eligibility Conditions

- Summer School is open to final year Postgraduate students/research scholars from all Institutes, Colleges and Universities. Preference will be given to the students having interest towards Data Science, Computer Vision, Machine Learning, open source Tools.

### Desirable Qualification

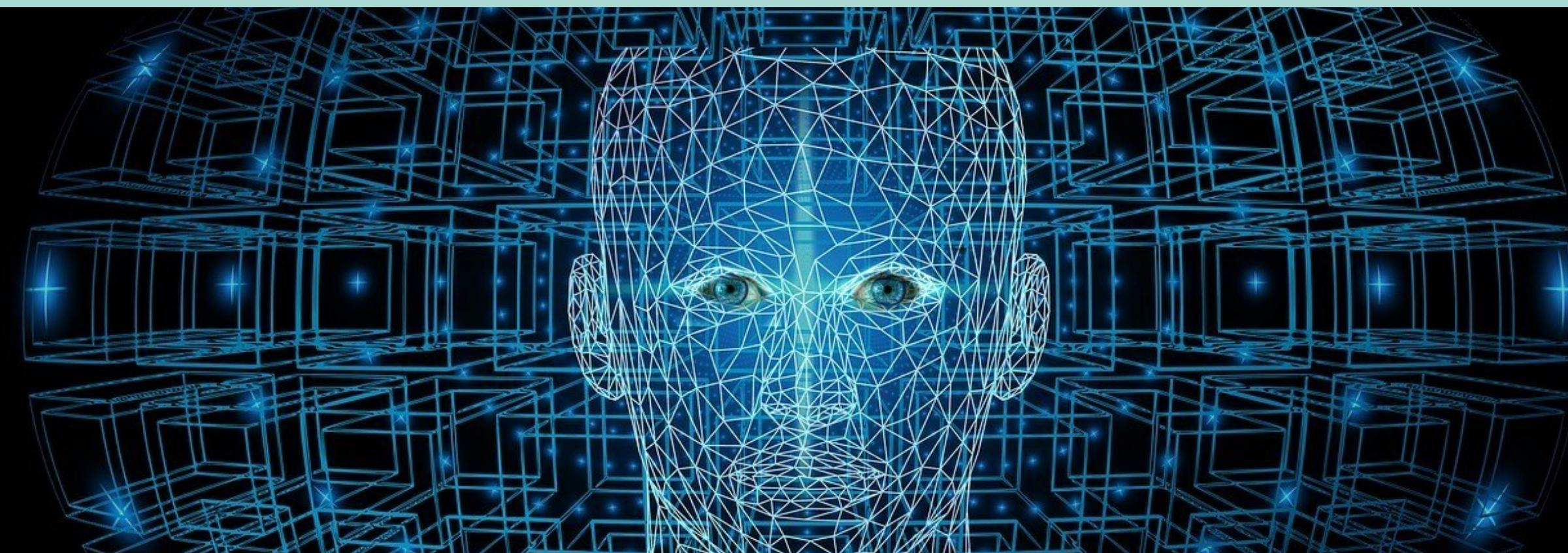
- Good academic record and experience in the relevant areas of specializations.
- Valid GATE score /NET JRF Validity in relevant Engineering or Science stream.
- Strong background and understanding of any Data Science
- Publication(s) in recognized national/international conferences and journals of repute.

### Contents to be covered

- Introduction to Image Processing and Computer Vision (CV)
- Main Goals and challenges of the CV, Image Processing Goals and Tasks.
- Traditional approaches in Image Processing
- Feature Extraction and their applications to Image Processing
- Introduction to OpenCV for Image Processing
- Introduction of OpenVino Frameworks
- OpenVINO IR format ,
- Model Converter, SSDLite ,MobileNetV2 Open Model Zoo, Openvino-dev package.
- Creating a AI Model Using OpenVino
- Testing and Validating the AI Model based on Computer Vision
- Introduction to Deep Learning (DL)
- Introduction to SCILAB
- Hands on SCILAB functions
- Basic differences between Conventional ML and DL approaches,
- Autoencoder for Feature Extraction and Image Enhancement with Model building
- Applications of CNN in Medical Image analysis with Model building
- Applications of CNN in healthcare

### Nature of Support

- The internship will be given for meeting daily necessary expenses such as stationery, consumables, accommodation, food, etc, as per the norms of the funding agency.
- The period of the Training and Skill Internship shall be for eight weeks.
- The participating students will also be eligible for TA reimbursement for their journey to the host institute from their hometown/home institute, both ways, as per the Government of India norms.
- Certificate will be provided to the interns after the successful completion of the internship tenure.



### How to apply?

Link :-

<https://docs.google.com/forms/d/e/1FAIpQLSfi-rX9bfNYMr4wlKnNHvDWxzD3PmdAOvT-grO30ILPSSIAdg/viewform>

### Important Dates

Registration opens May 30, 2022

Last date for application June 12, 2022

Display of shortlisted candidates June 13, 2022

Workshop dates June 20-July 02 , 2022

### Patron

Prof. Rahul Gupta

Dean, Faculty of Mathematical Sciences & Rector, Bhaderwah Campus  
University of Jammu

### Convenor

Dr. Jatinder Manhas

In-charge Head, Deptt. Computer Sc. & IT  
Bhaderwah Campus, University of Jammu

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### Event Organizer

Dr.Ashok Sharma

Assistant Professor

email- drashoksharma@jammuuniversity.ac.in

Contact no.- 8825081793

Sh. Neeraj Kumar, Assistant Professor  
[ Technical Software Support]  
[9906014030]

Dr Abid Sarwar, Assistant Professor  
[ Transport Incharge ]  
[9697436894]

Sh. Ajay Lakhnotra, Assistant Professor  
[ Accommodation Incharge]  
8492277706,9796006678

### Technical Team

Mrs. Bablu Sharma ,Programmer

Mr. Parvesh Singh ,Assistant Programmer

Mr. Yasser Ali ,Assistant Programmer

Venue- Bhaderwah Campus ,University of Jammu, Bhaderwah Distt:Doda,J&k-182222

