RELEVANCE OF THE STC:

Deep learning applications have the potential to revolutionise smart cities by providing intelligent solutions to various urban challenges. It offers the ability to analyse and make sense of large volumes of data, enabling more efficient and intelligent management of urban infrastructure, including health systems, public safety measures, optimisation of energy consumption, waste management, and management of smart city grids. Here are several key motivations for utilising deep learning in smart city applications:

Remote health monitoring and prognosis: The use of Deep Learning technologies can overcome the burden of chronic disease by developing a system to monitor biomedical signals and medical images.

Biometric security: Deep learning has made significant advancements in biometric applications, revolutionising the field of biometrics with its ability to extract meaningful and discriminative features from complex data.

Enhanced Quality of Life: Deep learning applications can contribute to improving the overall quality of life in smart cities.

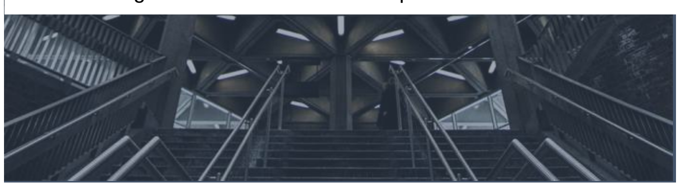
Overall, deep learning has the potential to transform smart cities by harnessing the power of data and artificial intelligence to optimise resource utilisation, improve efficiency, enhance public safety, and create more sustainable and livable urban environments.

The workshop will have three major tracks:

- Deep Learning applications for Biometrics and Digital Forensics
- Deep Learning applications for Biomedical Engineering
- Deep Learning applications for Intelligent urban infrastructure

Workshop Objectives:

- To provide participants with an in-depth picture on the state-of-the-art in new and emerging applications of Deep Learning for smart cities.
- To provide research and application oriented learning for secure and healthy society using Deep Learning methods.
- To impart hands-on sessions on tools for biometrics, biomedical engineering and intelligent multimedia.
- To provide the academic body of knowledge on Deep Learning-enabled transformation in public services



Patron

Prof. K. Umamaheshwar Rao, Director, NIT Rourkela

Chief-Guest

Prof. Sankar Kumar Pal, (Padma Shri) ISI Kolkata

Chairperson

Prof. Bibhudatta Sahoo HoD (CS) NIT Rourkela

Keynote speakers

Prof. Sankar Kumar Pal, (Padma Shri) ISI Kolkata

Prof. Sumantra D Roy, IIT Delhi

Prof. Amitava Chatterjee, Jadavpur University

Prof. Amit Singh, NIT Patna

Prof. Vinit Jakhetiya, IIT Jammu

Prof. Deepak R Nayak, MNIT Jaipur

Prof. Basant Agrwal, Central Univ. Raj.

Prof. Kshtiz Verma, JKLU, Jaipur

Prof. Parmod Gaur, BITs Pilani (Dubai)

Prof. Rahul Raman, IIIT Kanchipuram

Prof. Prakash Choudahry, Central Univ. Raj.

Prof. Vibhor Kant, BHU

Coordinators

Dr. Puneet Kumar Jain (NIT Rourkela)

Dr. Sambit Bakshi (NIT Rourkela)

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NATIONAL INSTITUTE OF TECHNOLOGY ROURKELA

Department of Computer Science and Engineering
National Institute of Technology Rourkela

Organising

A

Five-Day Short-Term Course

on

Deep Learning Applications for Smart Cities

September 11 – 15, 2023

Sponsor

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About National Institute of Technology Rourkela

National Institute of Technology (NIT) Rourkela is Institution of national importance funded by the Government of India. NIT Rourkela was established in 1961 as the Regional Engineering College (REC) Rourkela and was later upgraded to the status of an NIT in 2002. The campus covers an area of 262 hectares and provides a serene and conducive environment for academic pursuits. QS World University Ranking placed NIT Rourkela in the rank band of 601-650 for the subject Computer Science and Information Systems. In India, It was ranked 16 among engineering colleges by the National Institution Ranking Framework (NIRF) in 2022. For details about the Institute, please visit the website at: www.nitrkl.ac.in

About Computer Science and Engineering

Computer Science and Engineering (CSE) at NIT Rourkela is one of the most popular courses offered by the Institute. The Department has a strong faculty team with extensive academic and research experience from premier Institutes. The department offers undergraduate, postgraduate, and doctoral programs in computer science and engineering.

Important Dates:

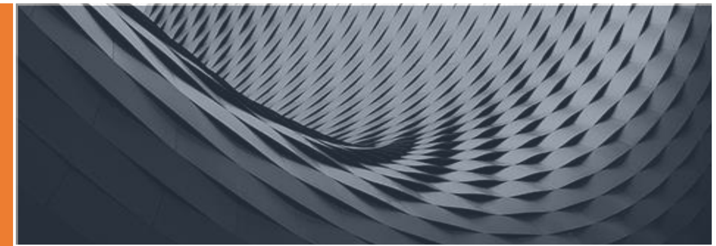
Registration starts	10th Aug 2023
Registration ends	10th Sep 2023
Workshop dates	Sep 11-15, 2023

Topics To Be Covered

- **Granular Mining in Video Analytics: Shallow to Deep Learning**
- **Dictionary learning based IOT solutions for smart cities**
- **Deep learning-based data hiding for smart healthcare.**
- **Multimedia Quality Assessment and it's application in Deep Learning**
- **Intelligent Visual Analysis for Pedestrian Safety and Beyond**
- **Optimisation in deep learning: Are we really optimising cost functions?**
- **Role of Deep Learning models for Biomedical Applications**
- **Image Annotation :Then and Now**
- **Advances in Deep Learning for Biomedical Image Processing: Challenges and Future Directions**
- **Application of AI to stroke rehabilitation**
- **Deep Learning applications for biomedical signal processing**
- **Electricity load forecast using environmental adaptation method and artificial neural network**
- **Convolutional neural networks for NLP**
- **Matlab: Deep Learning Applications for Biomedical Engineering**

Target Participants

The short-term course is of immense interest for UG/ PG students, research scholars/professionals, staff/ faculty members and industry professionals working in the area of Intelligent Transportation Systems for Smart Cities. The participants having Computer Science and Engineering, Electronics and Communication Engineering, and Electrical Engineering background will be benefitted with this short-term course.



Registration Details

Registration Type	Fees
Industry	₹3000
Faculty	₹2000
Students (From Other Colleges)	₹300

The Students/Faculty of NIT Rourkela are exempted from the payment of the registration fee.

Bank Account Details for Registration Fee:

Account Name	CONTINUING EDUCATION, NIT ROURKELA
Account No	10138951784
Bank	State Bank of India
Branch	NIT Campus Rourkela (02109)
IFSC Code	SBIN0002109

Registration Form:

To complete online registration, the participants need to fill the following google form:

https://forms.gle/ZJ7oPzS1jCZyWUDM9

E-certificates will be provided to the registered participants upon successfully completing the course

Contact and Queries: Please send your queries directly to the course coordinators via email: jainp@nitrkl.ac.in

Student Coordinators: Pratyusa Dwibedy (Mo. No. : 7978708824)
Aakash Kanase (Mo. No. : 7040061153)