



Six Week Summer Internship
on
Visual Computing with PyTorch

29th May –9th July, 2023
(including Project Work + Research Paper)

Organized by
Department of AI&DS
Indira Gandhi Delhi Technical University for Women

Patron
Dr (Mrs.) Amita Dev,
Hon'ble Vice Chancellor, IGDTUW

Organizing Committee
Prof. Poonam Bansal, HoD (AI&DS), IGDTUW
Dr. Himanshu Mittal, Assistant Professor, Co-ordinator

About the University

Indira Gandhi Delhi Technical University for Women (IGDTUW) is a State University of Government of Delhi. The University facilitates and promotes studies, research, technology, innovation, incubation, and extension work in emerging areas of professional education among women. The objective of the University is to foster industry relevant research and innovations and empower the women of our country through value based higher education making them employable, self-reliant, responsible citizen of the country.

About the Department

Department of Artificial Intelligence and Data Science (AI&DS) focuses on a four-tiered strategy of Education, Research, Development and Innovation in the field of AI, Machine Learning, Deep Learning and Data Sciences. The department aims at providing not only the core computing subjects such as Data Structure, DBMS, Networking, Algorithms etc but also gives intensive inputs in areas of artificial intelligence, machine learning, deep learning and big data analytics along with strong application domains such as NLP, Computer Vision, Robotics and others.

About the Summer Internship Program

The technical sessions for Summer Internship program will be conducted from 29th May – 9th July 2023. The students will be learning about PyTorch programming and visual analysis through deep learning models like CNN, Autoencoders, Semantic Segmentation, Object detection, GAN, Vision Transformers, Video Analysis etc. At the end of the technical sessions, the students will carry out the project work.

Course Contents

Technical Sessions (29th May – 9th July 2023)

Course Content includes:

- Introduction to PyTorch fundamentals
- Multilayer neural network and Deep learning models
- Implementing Deep Neural Networks using PyTorch
- Visual Computing and Feature extraction
- Introduction to Computer Vision
- Image Classification using CNN with PyTorch
- Object localization and Detection
- Semantic Segmentation models
- Transfer learning for classification
- Style Transfer and its application
- Autoencoders and its variants
- Generative Adversarial Network
- Different types of GAN
- Vision Transformers (ViT)
- Introduction to Video Analysis using PyTorchVideo Library
- Video Analysis using Spatio-Temporal Learning
- Project Work
- Research Paper

Internship Research project/ Paper:

During the internship, students will work on research project in a team. The team will be allocated faculty mentors to thoroughly guide them in writing research paper. University will support the Registration Fee for presenting the Paper in the Conference as per University Norms. Additionally, if paper is accepted for SCOPUS Journal, students will also get a Cash reward as per University Norms.

Resource Persons: Experts from Industry and Academics.

Who can Apply: B.Tech., M.Tech., MCA, Ph.D. having knowledge of python programming.

Important Date:

Last Date to apply : 25th May, 2023
Internship Dates : 29th May, 2023 – 9th July, 2023
Duration of Online Sessions : 29th May, 2023 – 9th July, 2023

How to Apply:

Interested candidates should submit the registration fee and fill the online registration form latest by **25.05.2023 by 05:00 pm** at the following link:

<https://forms.gle/BRAj8aBnspVUpeYcA>

Registration Fee*:

Rs 1250/- (for IGDTUW students)

Rs 2250/- (for outside IGDTUW students)

Bank Details for Registration Fee Payment

Name and Address of Beneficiary : Registrar, IGDTUW
Bank Account Number : 09001000018949
IFS Code : PSIB0001098
Name and Address of Bank : Punjab and Sind Bank, Kashmere Gate, Delhi 110006

***Registration Fee is non-refundable**

Certificate: On successful completion, Internship certificate will be provided

Contact Us: For any Query, please write to **dvcpai.igdtuw@gmail.com**