

ABOUT GNITS

G. Narayanamma Institute of Technology & Science (GNITS) (for Women), sponsored by G.Pulla Reddy charities Trust was started on 15th December, 1997. Sri G.Pulla Reddy was an eminent businessman of great integrity and impeccable reputation. GNITS is one of the top most colleges in Telangana and AP States. The objective of GNITS is to provide an excellent learning facility for women in order to pursue education in engineering. The institute aims to promote technical education among women to enhance and build-up a new generation of thinkers, innovators and planners in the technical realms of Science & Technology. GNITS received UGC autonomous status for a period of 10 years from 2018 and is affiliated to Jawaharalal Nehru Technological University (JNTUH), Hyderabad. The institution has been accredited by NAAC for a period of six years from 2013. The institution is approved by AICTE, accredited by NBA, and is ISO 9001:2015 Certified. GNITS offers 5 B.Tech. Programmes in CSE, ECE, EEE, ETM and IT and 5 M.Tech programmes in CSE, DECS, PEED, WMC & CNIS in respective departments with 2640 students enrolled in B.Tech. stream and 180 in M.Tech stream. GNITS provides hostel facility with modern amenities catering the needs of 800 students in the campus itself. GNITS campus is enabled with Wi-Fi connectivity and has 150 Mbps leased line Internet. The college supports skill upgrading and overall development of students through Apple Lab, BTBP Lab, IOT Centre of Excellence, EDC Cell, I-Cell, Sports Club, etc. This is reflected in the placements offered to 80% of students in 2018. GNITS girls team won first prize (17 Lakhs) in Aegon international 24-hour Health and Wealth Hackathon.

ABOUT CSE DEPARTMENT

The Department of Computer Science and Engineering is one of the pioneer departments of GNITS with an intake of 180 in UG and 18 in PG. The department has 39 well qualified teaching and 10 non-teaching staff. Department has 6 Ph.D holders in which 3 are guiding 18 Ph.D. scholars and 13 were awarded from various Universities. Department of CSE established IoT Enabled Center of Excellence under AICTE MODROBS scheme. The Department has a credit of Career Award for Young Teachers from AICTE with a grant of 10.5 lakhs for a period of 3 years. The B.Tech program has been accredited by NBA in the year 2017. The students of the department are being selected through campus

recruitment in reputed MNCs like Amazon, Bank of America, JPMC, Deloitte, Accenture, Infosys, NCR, Service Now, State Street, UHG, CDK Global, WellsFargo, VISA Inc, UX Reactor, L & T, ADP, GGK Tech., DMR Inc, DBS, BTBP etc. with 85% offers in the last academic year. Two students have been offered placement by Amazon(SDE) with highest package of 15 lakhs. Besides the teaching learning process, CSE department regularly conducts hackathons, innovation idea contests, coding challenges, workshops, guest lectures, group discussions, refresher courses, etc. to enhance the skills of students and teaching community.

IMPORTANT DATES

Last Date of submission : 28/11/2019

Information of acceptance : 29/11/2019

ALL CORRESPONDENCE TO

The HOD, CSE Dept., GNITS, Shaikpet, Hyderabad-500104.

E-mail: cseworkshop@gnits.ac.in

ORGANIZING COMMITTEE PATRONS

Sri. P. Subba Reddy, Chairman, GNITS.

Smt. G. Srividya Reddy, Vice-Chairman, GNITS.

CHAIRMAN

Dr. K. Ramesh Reddy, Principal, GNITS.

CONVENOR

Dr. M. Seetha,
Professor & Head, Dept. of CSE, GNITS.

COORDINATOR

Dr. A. Sharada
Professor, CSE.
Ph: 9652780257

CO-COORDINATORS

Mrs. D. Naga Swetha
Asst. Prof., CSE
Ph: 9949613634
Mr. G. Nagababu
Asst. Prof., CSE
Ph: 9573422687

MEMBERS

All faculty of CSE

LOCATION & TRANSPORT

The college is located 5kms from MehdiPatnam (on the way to HCU) near Darga bus stop. BUS RouteNos(from MehdiPatnam) : 116,118G, 216, 217, 6C, 126.

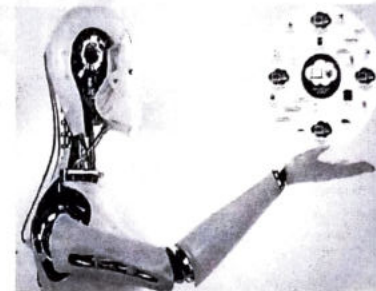
One-Week

National Level Workshop

on

Edge Intelligence: Edge Computing in Artificial Intelligence Era

2nd - 7th December, 2019



Organized by
Department of CSE

in association with
SmartBridge Educational Services Pvt. Ltd.



G. Narayanamma Institute of Technology & Science

Autonomous (For Women)
Accredited by NAAC of UGC & NBA
An ISO 9001:2015 Certified Institute
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Telangana State, India.
Phone: +91-(0)-40- 23565648/649
Fax: +91-(0)-4023564187
Website: www.gnits.ac.in

ABOUT THE WORKSHOP

Edge computing is a distributed computing concept that integrates intelligence to edge devices, also called edge nodes, allowing data to be processed and analyzed in real time near the data collection source and need not to be uploaded directly to the cloud or to a centralized data processing system. Here, data is processed close to the data collection source, so there is no longer the need to transfer data to the cloud or to an on-premises data center for processing and analysis which will lessen the load on both network and servers. In addition to accelerating digital transformation for industrial and manufacturing enterprises, edge computing technology allows for more innovations including artificial intelligence and machine learning applications that are thriving with the breakthroughs in deep learning and the upgrade of hardware architectures. Billions of bytes of data, generated at the network edge, put great demands on data processing and structural optimization. Therefore, there exists a strong demand to integrate Edge Computing and AI, which gives birth to Edge Intelligence.

COURSE CONTENTS

- ❖ Introduction to AI, Edge computing and Nvidia Jetson Nano, Neural Networks and Keras framework.
- ❖ Building ANN Using Keras (Tensorflow backend) using sample dataset.
- ❖ Evaluating, Improving and Tuning the ANN.
- ❖ Introduction to Arduino Nano 33 BLE Sense, tflite models and deploying tflite models in Arduino Nano 33 BLE Sense.
- ❖ Introduction to Convolutional Neural Networks and building Image Recognition model using CNN.
- ❖ Evaluating, Improving and Tuning the CNN.
- ❖ Case study and Application development in interested research area.

RESOURCE PERSONS

Experts from academia and industry.

ELIGIBILITY

Faculty and PG students from various Engineering and MCA colleges can attend the programme. Industry persons working in the concerned discipline can also attend.

DEPARTMENT VISION

To provide engineering education in the field of Computer Science with evolving technologies and to produce self-motivated, employable individuals to society.

DEPARTMENT MISSION

1. To pioneer education in Computer Science and Engineering, Mathematics and Sciences, to mould the overall personality of students.
2. To nurture the students to be dynamic, industry ready and to have multidisciplinary skills and leadership qualities.
3. To inculcate work ethics and commitment in students for their future endeavors to serve the society.

REGISTRATION FEE

- Faculty & PG students registering for the workshop are required to pay Rs.1500/- by DD in favor of the **Principal, GNITS**, payable at Hyderabad.
- The registration fee includes workshop material, lunch, snacks, etc.

APPLICATION FORM

- Registration form can be downloaded from the website www.gnits.ac.in
- Limited hostel accommodation is available for outstation lady faculty only.
- You may confirm your participation by mailing the scanned copy of registration form and DD to the following mail id.

Email: cseworkshop@gnits.ac.in

WEBSITE: www.gnits.ac.in

One-Week

National Level Workshop

on

Edge Intelligence: Edge Computing in Artificial Intelligence Era

2nd - 7th December, 2019

Application Form

1. Name:

2. Designation:

3. Institution:

4. E-mail:

5. Contact No.....

6. D.D No: Bank:Date:

7. Address for Correspondence:

8. Educational Qualifications with specialization:

Signature of the Applicant

Forwarded by

Signature & Seal of Sponsoring Authority

Place:

Date:

DEPARTMENT OF CSE

Date: 11-12-2019

Workshop Report

Title of the Workshop: One-Week National Level Workshop on

“Edge Intelligence : Edge Computing in the Artificial Intelligence Era”

Duration of the Workshop: 2nd to 7th December, 2019.

Venue: CSE Dept., GNITS.

Total number of participants attended the workshop: 43

Chief Guests for the Workshop:

1. Dr. K. Sirisha, Founder & CEO, Empiezo IT Solutions Pvt. Ltd.
2. Mr. P. Mohan, Senior Data Scientist, Independent Consultant for Data Science, Tech Mahindra.


Speakers for the Workshop:

1. Mr. Ravi Katukam, Director IP & Digital Innovation, Techolution.
2. Dr. Vineeth N Subramanian, Associate Professor and Head, Department of AI, IIT - HYD.
3. Mrs. Swathi Annamameni, AI Developer, SmartBridge Educational Services Pvt. Ltd., HYD.
4. Mr. Surya Tej, Python Developer, SmartBridge Educational Services Pvt. Ltd., HYD.

With a pleasant and motivational speech of **Honorable Chief Guest Dr. K. Sirisha**, the Inaugural Function has started. She has focused on current trending technologies and their role in the market, which impressed the participants by providing valuable information. An eminent speaker and Industry Person **Mr. Ravi Katukam** has given many new upcoming innovative thoughts to the participants and focused on latest project ideas, their implementations and methodology applicable to it. This inspired participants to focus and enhance their ideas and placed in to reality.

The hands-on sessions carried out by **Mrs. Swathi and Mr. Surya Tej** on Artificial Intelligence and Machine Learning has given participants a very good-learning experience with in a short period of time. Participants were given a practical exposure on how to build a neural network model using Artificial Neural Networks and evaluating the accuracy of the model using ANN, Model deployment on Jetson Nano, Building a Web Application using Flask Framework.

With this practical experience, all the participants actively participated in **Hackathon**, where the participants been formed in to teams and thereby assigning usecases to different teams. The following are the different use cases worked out by participants.


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- Detection of Motor Cyclists without helmet using CNN
- Crop Protection using CNN
- Prediction of Mode of delivery in pregnancies using ANN.
- Forest Combustion Recognition using AI.
- A neural network for Wine Quality Estimation.
- Intelligent Video surveillance System.
- Emotion classification from Facial expressions using CNN.
- Digit Recognizer.
- Fruit Recognizer.
- Brain Tumor Detection.
- Face Gesture, Age and Gender Prediction.

All the participants enthusiastically participated in the Hackathon and expressed a heartfelt thankfulness for the conduction of Practical Oriented Workshop where they get a chance of practical experience, make them feel confident to apply and continue their implementation methodology and strategies further towards their research as well. Project assessment was done by the Judges and suggestions were given to the participants to enhance the projects in a better way. To encourage the participants and move them towards research closely, Prizes has been awarded for the best project winners and runners.

Dr. Vineeth N Subramanian, a distinguished speaker has given deep insights in the area of Deep Learning and Machine Learning. Discussing on different methods and models used in implementation has motivated participants towards current research area of work.

80% of the participants graded the workshop as 'Excellent'. The Participants of the workshop have given a positive feedback. They highlighted the usefulness of the content projected and are very much satisfied with the Hands-On Sessions. They expressed their interest in conduction of many more workshops in future.



Enthusiastic Participation of faculty in Hands-on Sessions



Reviewing the Projects during Hackathon

[Handwritten Signature]
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Department: Information Technology

2019-20

REPORT

1-week National Level workshop on
"Edge Intelligence: Edge Computing in the Artificial Intelligence Era"

Date of program: 02-12-2019 to 07-12-2019

Resource person: Dr.K.Sirisha ,Founder & CEO, Empiezo IT Solutions.
Mr.P.Mohan,Senior Data Scientist, Tech Mahindra
Mr. Ravi Katukam, Director IP & Digital Innovation, Techolution

About the Program:

This workshop is designed to explore the intersection of edge computing and artificial intelligence (AI).The workshop covers fundamental concepts of edge computing and its synergy with AI, emphasizing the advantages of processing and analyzing data on devices or edge servers rather than relying solely on centralized cloud services. Gained insights into the potential applications and benefits of deploying AI algorithms at the edge, including reduced latency, improved efficiency, and enhanced privacy. By the end of the workshop, participants understood how edge intelligence reshapes the landscape of AI applications, making it a valuable resource for individuals keen on leveraging cutting-edge technologies at the intersection of edge computing and artificial intelligence. The hands on sessions were helpful in pursuing the research.


A. Bhamasankaram


V.Usha
Assistant Professor,IT


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