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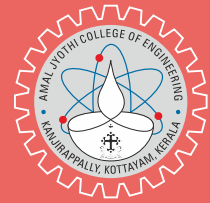
6

DAYS SHORT TERM  
TRAINING PROGRAMME

# DATA ANALYTICS AND MACHINE LEARNING TOOLS

Phase II

17 - 22 August 2020



AMAL JYOTHI  
COLLEGE OF ENGINEERING  
KANJIRAPPALLY, KOTTAYAM



SPONSOR

All India Council for Technical Education



ORGANIZED BY

Department of  
Master of Computer Applications

## About Amal Jyothi College of Engineering

*Amal Jyothi College of Engineering has established itself as a benchmark of excellence in technical higher education and research. Founded in 2001 by the Catholic Diocese of Kanjirapally, Amal Jyothi is approved by the AICTE and affiliated to APJ Abdul Kalam Technological University (KTU), Kerala. It is the first new generation engineering college in Kerala with the prestigious NBA accredited departments and the first engineering college in Kerala with the recognition of 'A' grade from NAAC.*

### About MCA Department

The Department of Master of Computer Applications since its inception in 2009 has been an exemplar of academic excellence. The Department is bestowed with an excellent team of faculty members pursuing excellence in delivery of academics with proficiency in latest technologies. Inculcating concept-oriented subject knowledge through a holistic learning environment supplemented with practical training, the Department has unfailingly delivered world-class talent and created the finest software professionals to be industry ready. The Department has always been in forefront to organize training programmes in current technologies. The courses offered include MCA with an intake of 120 and MCA Integrated with an intake of 60.

### Why Data Analytics & Machine Learning ?

In the 21<sup>st</sup> century, Data Analytics and Machine Learning have revolutionized the way organizations work. The job opportunities for professionals who are well-trained in Machine Learning and Analytics are skyrocketing too. This has encouraged many universities across the country to introduce Machine Learning and Data Analytics as a subject in UG & PG curriculum especially in management and engineering disciplines. But these emerging technologies and the industries that they are used in are evolving at a scintillating pace. Therefore, there is a widening gap between the demand and supply of these new-age tech skills. Amal Jyothi College proposes to bridge the gap with this AICTE sponsored Short-Term Training Programme.

### About The STTP

Data Analytics is the process of examining data sets in order to draw conclusions about the information they contain, with the aid of specialized systems and software. In commercial industries Data Analytics technology and techniques are widely used to enable organizations to make more informed business decisions. It aids Scientists and Researchers to verify scientific models, theories and hypothesis. Machine Learning is a method of Data Analytics and a branch of Artificial Intelligence that identifies complex patterns about the data under investigation to make intelligent decisions with minimal human intervention. Machine Learning is a fast-growing discipline in recent years, which has gained a lot of importance and wide acceptance. This programme is intended to introduce the algorithmic approaches in Data Analytics and Machine Learning. Recent research directions in these topics are being discussed.





**This STTP enhances knowledge and skills of students /research scholars /faculty /scientists in active research, in the area of Data Analytics, Machine Learning and related technologies.**



## Aim

### Objective of the STTP

- ... To improve quality and equity in engineering teachers in order to up-grade the knowledge, enhancing research and teaching skills.
- ... To develop a basic understanding of the principles of Data Analytics and Machine Learning and derive practical solutions using predictive analytics.
- ... To gain knowledge in recent trends and advancement of Data Analytics and Machine Learning concepts and tools, and practice the same using R and Python.
- ... To ensure that the faculty members are trained in the niche area of Data Science, various issues in Data Analytics, Machine Learning techniques and its use in analytics.



### Outcomes

After successful completion of this programme the participants shall be able to:

- ... Understand how Machine Learning concepts are related to statistics and analytics.
- ... Understand how Machine Learning uses computer algorithms to search for patterns in data.
- ... Learn how to use data patterns to make decisions and predictions with real world examples.
- ... Identify the recent advancements in Data Analytics and Machine Learning.
- ... Apply Data Analytics and Machine Learning tools and concepts for research and development.
- ... Learn the various aspects of data handling and how information can be extracted from data.



### Programme Features

- The programme is split into lectures and hands-on sessions.
- Hands-on experience on basic & advanced level topics.
- Interaction & learning with experts from academia & industry.
- The resource persons are from leading institutions like IIT, NIT, Universities and industry experts.



### Eligibility

Faculty members and researchers of AICTE approved Colleges/ Institutes and delegates from Industries are eligible to attend this programme.



# SCHEDULE

AUG

17

Day

1

Session 1

## Introduction to Data Analytics and Tools

Dr. Terry Jacob Mathew, Associate Professor  
*Mar Athanasios College for Advanced Studies, Tiruvalla*

Session 2

## Machine Learning using MATLAB Tools

Dr. Therese Yamuna Mahesh, Associate Professor  
*Amal Jyothi College of Engineering, Kanjirapally*

AUG

18

Day

2

Session 1

## Python Data Structures, Decision Making

Dr. Jeeva Jose, Associate Professor  
*Department of Computer Applications  
Baselios Poulouse II Catholicos College, Piravom*

Session 2

## Functions, Modules, Higher Order Functions, Comprehensions

Dr. Jeeva Jose, Associate Professor  
*Department of Computer Applications  
Baselios Poulouse II Catholicos College, Piravom*

AUG

19

Day

3

Session 1

## File Handling & Regular Expressions

Dr. Jeeva Jose, Associate Professor  
*Department of Computer Applications  
Baselios Poulouse II Catholicos College, Piravom*

Session 2

## Numpy & Matplotlib

Dr. Jeeva Jose, Associate Professor  
*Department of Computer Applications  
Baselios Poulouse II Catholicos College, Piravom*

AUG

20

Day

4

Session 1

## Data Manipulation Technique using R programming

Dr. David Maxim Gururaj, Assistant Professor  
*School of Advanced Sciences, VIT Chennai*

Session 2

## R for Inferential Statistics

Dr. S Dhanasekar, Assistant Professor  
*School of Advanced Sciences, VIT Chennai*



# SCHEDULE Contd...

AUG

21

Day

5

## Session 1

### **Deep Learning using TensorFlow**

Dr. Elizabeth Sherly, Professor

*Indian Institute of Information Technology and Management, Kerala*

## Session 2

### **A Practical Introduction to Natural Language Processing**

Dr. Anoop V S

*Senior Scientist and Head of Training Division*

*Kerala Block Chain Academy*

AUG

22

Day

6

## Session 1

### **Containerization with Docker**

Mr. Ashkar Ali

*Technical Consultant, ZYNUX*

## Session 2

### **Git as a Version Control System and Continuous Integration with Jenkin**

Ms. Jetty Benjamin, Assistant Professor

*Amal Jyothi College of Engineering, Kanjirapally*



## Registration

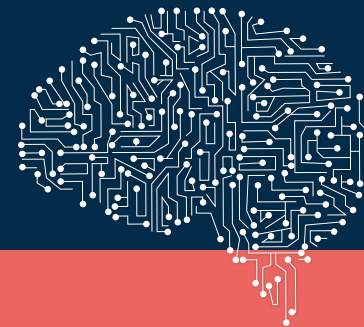
- ... Interested candidates must fill up the Google form available at following link: <https://forms.gle/PffeKU8cDDh6rcmQA> on or before 11<sup>th</sup> August 2020.
- ... The number of participants are limited to 200 and the participants will be selected on First come First serve basis. Registrations will be confirmed based on scrutiny by the Programme Evaluation Committee.
- ... The selected participant will be intimated by email on 12<sup>th</sup> August 2020.
- ... After receiving the registration confirmation mail, the participant should fill in the registration form given in the confirmation mail and email it to

sttp@amaljyothi.ac.in on or before 14<sup>th</sup> August 2020.

- ... There is no registration fee.

## Certificates

Certificate will be issued to those participants who attend all the sessions and qualify in the test conducted at the end of the programme.



## COMMITTEE

### ORGANIZING COMMITTEE

H.E. Mar Jose Pulickal, *Bishop, Diocese of Kanjirappally*  
Rev. Fr. Dr. Mathew Paikatt, *Manager*  
Rev. Fr. Jacob Kodimarathumootil, *Bursar*  
Dr. Z V Lakaparampil, *Principal*  
Dr. Jacob Philip, *Dean - Academic*  
Dr. Soney C George, *Dean - Research*  
Prof. Tomy Joseph, *Dean - Admin*  
Rev. Fr. Rubin Thottupuram, *HOD - CA*  
Prof. Manoj T Joy, *HOD - CSE*

### PROGRAMME EVALUATION COMMITTEE

Dr. Z V Lakaparampil, *Principal*  
Dr. Juby Mathew, *Coordi. and Member Secretary*  
Rev. Fr. Rubin Thottupuram, *HoD - CA, Member*  
Prof. Manoj T Joy, *HoD - CSE, Member*  
Dr. Jeba Sonia J, *Assoc. Prof., CSE, Subject Expert*

### COURSE COORDINATOR

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## CONTACT

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