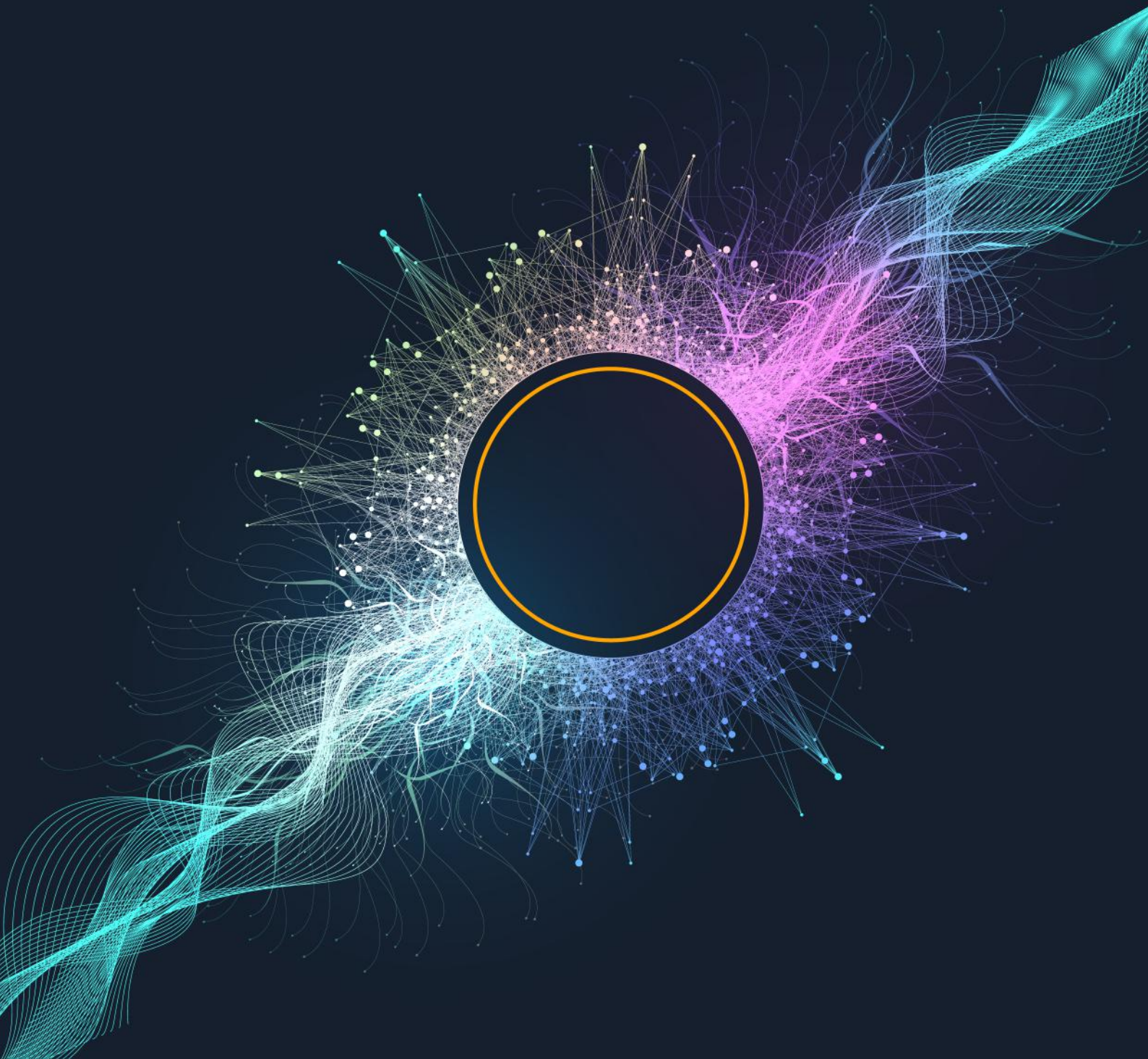IIT PALAKKAD

PROFESSIONAL CERTIFICATE PROGRAMME IN
APPLIED DATA SCIENCE
STARTS ON JUNE 22, 2022 | 26 WEEKS

OVERVIEW

DATA: THE KEY TO BUSINESS BREAKTHROUGHS TODAY

Data is an integral part of any modern business. Collating, understanding and analysing data helps you build winning strategies which begets happier customers, stronger growth and content employees. Even in the current climate, the demand for data science professionals is at an all-time high.

The Indian Institute of Technology, Palakkad has designed **the Professional Certificate Programme in Applied Data Science** with a focus on upskilling the participant on Python, the world's #1 programming language, and Data Engineering. This programme is curated for professionals interested in building a career in Data Science.

STARTS ON
JUNE 22, 2022

DURATION
26 WEEKS

FORMAT
ONLINE VIDEO LECTURES

PROGRAMME FEE
INR 75,000 + GST

2020
saw a huge demand for data science jobs with as many as 2,50,000 being vacant.

(Quanthub, 2020)

In 2021,
92% organisations report that their pace of Big Data / AI investment is accelerating, up 40% from 2020.

(New Vantage Partners Executive Survey, 2021)

By 2025,
The Data Science and Analytics industry is expected to be worth 16 billion USD.

(Analytics Insight, 2020)

WHO IS THIS PROGRAMME FOR?

CALLING THOSE WHO AIM TO MAKE A BREAKTHROUGH

IIT Palakkad's programme in Applied Data Science is for professionals who want to understand the inner working of the world of Data Science to give them an advantage in the market.

This programme is ideal for early and mid-level professionals keen to upskill and gain cutting-edge knowledge in Data Science to give them an opportunity to make a career shift or to help them accelerate their careers.

Additionally, the Applied Data Science programme is aimed at executives overseeing software development who are looking to equip themselves with an up-to-date understanding in Data Science practices.
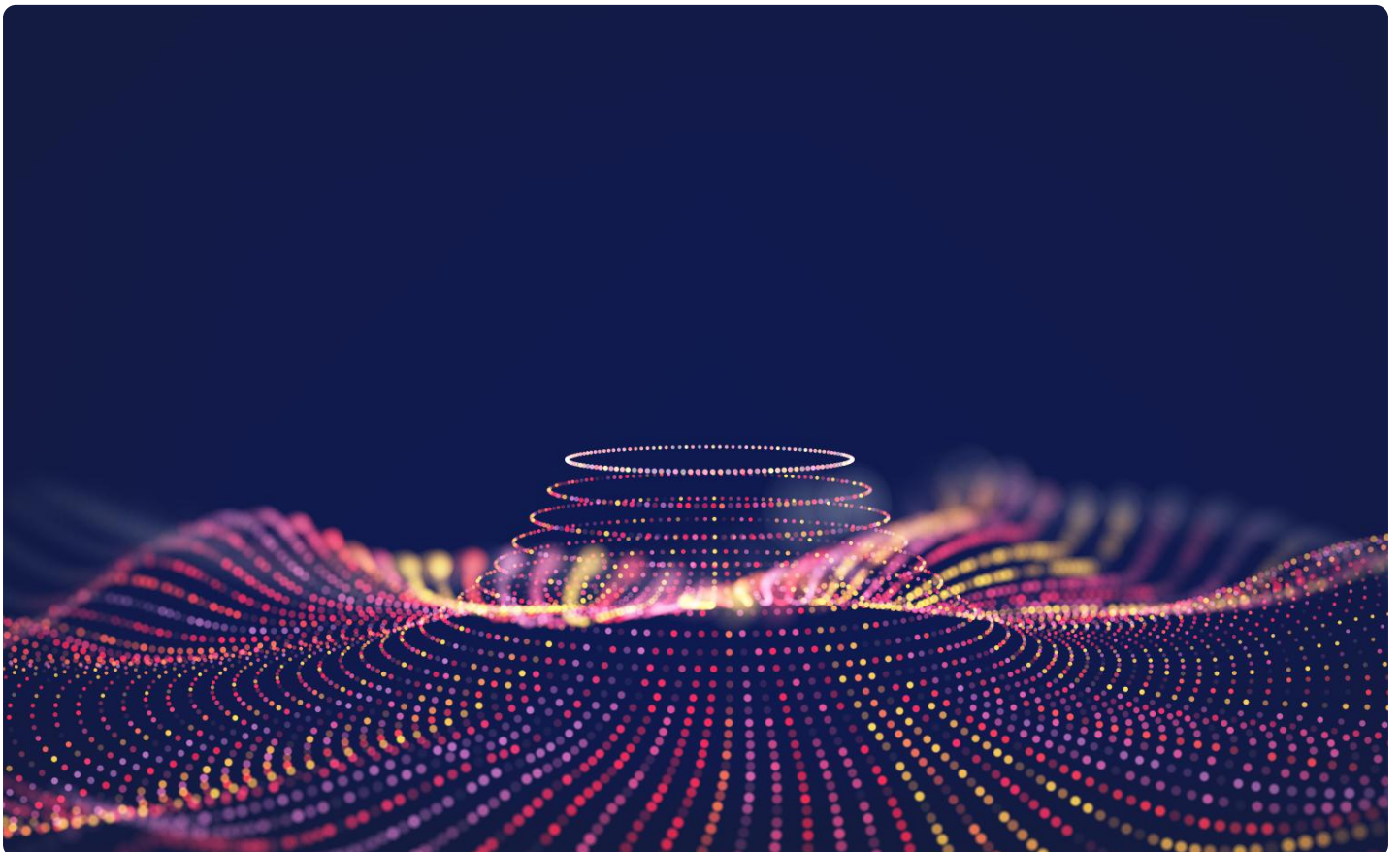
PROGRAMME COORDINATOR

Dr. Satyajit Das

Assistant Professor, Computer Science and Engineering
Indian Institute of Technology Palakkad

Dr Satyajit is one of the founding members of the Center for Research and Education in Data Science (CREDS) and Lab for Advanced VLSI and Artificial Intelligence (LAVA) at IIT Palakkad. He earned his joint PhD from the University of South Brittany, France, and the University of Bologna, Italy. His research interests are Computer Architecture, AI on Edge, and near-sensor Data Analytics.

> **There were 5 exabytes of information created between the dawn of civilization through 2003, but that much information is now created every two days.**
>
> *– Eric Schmidt, Ex-Executive Chairman at Alphabet Inc,*

PROGRAMME FACULTY

BREAKTHROUGH CAREERS NEED THE RIGHT MENTOR

Dr. Mrinal Kanti Das

Assistant Professor, Computer Science & Engineering
Indian Institute of Technology Palakkad

Dr. Mrinal Das works in the area of building hierarchical Bayesian models with applications in various domains. He is also actively working in privacy aware learning. His recent area of interest has been in Responsible AI, specially at the intersection of interpretability and deep learning. He obtained a PhD in Machine Learning from Indian Institute of Science (IISc) Bangalore in 2016. He was a postdoctoral fellow at Aalto University, Finland and UMass Amherst, USA before joining IIT Palakkad as Assistant Professor in the CSE department in 2017. He has published in top notch venues in ML such as ICML(2), AAAI, ICDM, CIKM, WSDM. He is currently supervising one PhD and two MS students in the area of ML. He has received SERB startup research grants in 2019 to work in ML. He has developed and taught several courses in the area of Data Science for the last four years. He is also actively associated with the Govt. of Kerala for training students in the domain of data science.

Dr. Sahely Bhadra

Assistant Professor, Computer Science and Engineering
Indian Institute of Technology Palakkad

Dr. Sahely serves as an Associate with the Centre for Research and Education on Data Science (CREDS). She received her PhD from the Indian Institute of Science (IISc) Bangalore. She has more than 10 years of experience working in the broad area of Machine Learning and Optimisation. Her areas of interest lie in multi-view kernel learning from noisy incomplete data with structural properties and extreme event analysis in time series data. Dr. Sahely has published in top venues in ML and bioinformatics such as ICML, JMLR, MLJ, ICDM, Bioinformatics.

INR 60 - 75 Lakhs PA

The average salary of a Data Scientist/ Big Data Professional with 3 - 10 Years experience in India.

(Michael Page India Talent Trends 2021)

PROGRAMME HIGHLIGHTS

STEPPING-STONES TO A BREAKTHROUGH CAREER

4 Office Hours with Faculty

65 Recorded Video Lectures

12 Assignments* and 12 Discussions

1 Project and 24 Quizzes

Peer Learning and Feedback

Dedicated Programme Support

26-week programme.
4-6 hours of weekly learning effort

Note:
- The final number of quizzes, assignments and discussions will be confirmed closer to the programme start.
- *Assignments are graded either by industry practitioners who are available to support participants in their learning journey and/or by the Emeritus grading team.

With the COVID-19 pandemic disrupting organizations, the demand for rising innovations like data science has accelerated further.

- Analytics Insight 2020

LEARNING OUTCOMES

Clean, optimise and interpret raw data using various data engineering tools

Solve a real-life classification problem using machine learning tools and techniques

Gain mastery over cutting-edge data science tools such as Python and Excel

Carry out Social Network Analysis and make recommendations

PACKAGES AND TOOLS COVERED

python™

along with

jupyter

CO

NumPy | pandas | matplotlib | seaborn | scikit learn

PROGRAMME MODULES

MODULE 1 : STATISTICS FOR DATA SCIENCE

- Probability - Joint, Conditional, Marginal
- Probability Distributions
- Univariate Analysis
- Bivariate Analysis
- Multivariate Analysis
- Sample and Population
- Sampling Techniques
- Sampling Size Calculations
- Correlation, Covariance and Interquartile Ranges
- Inferential Analysis-Hypothesis Testing

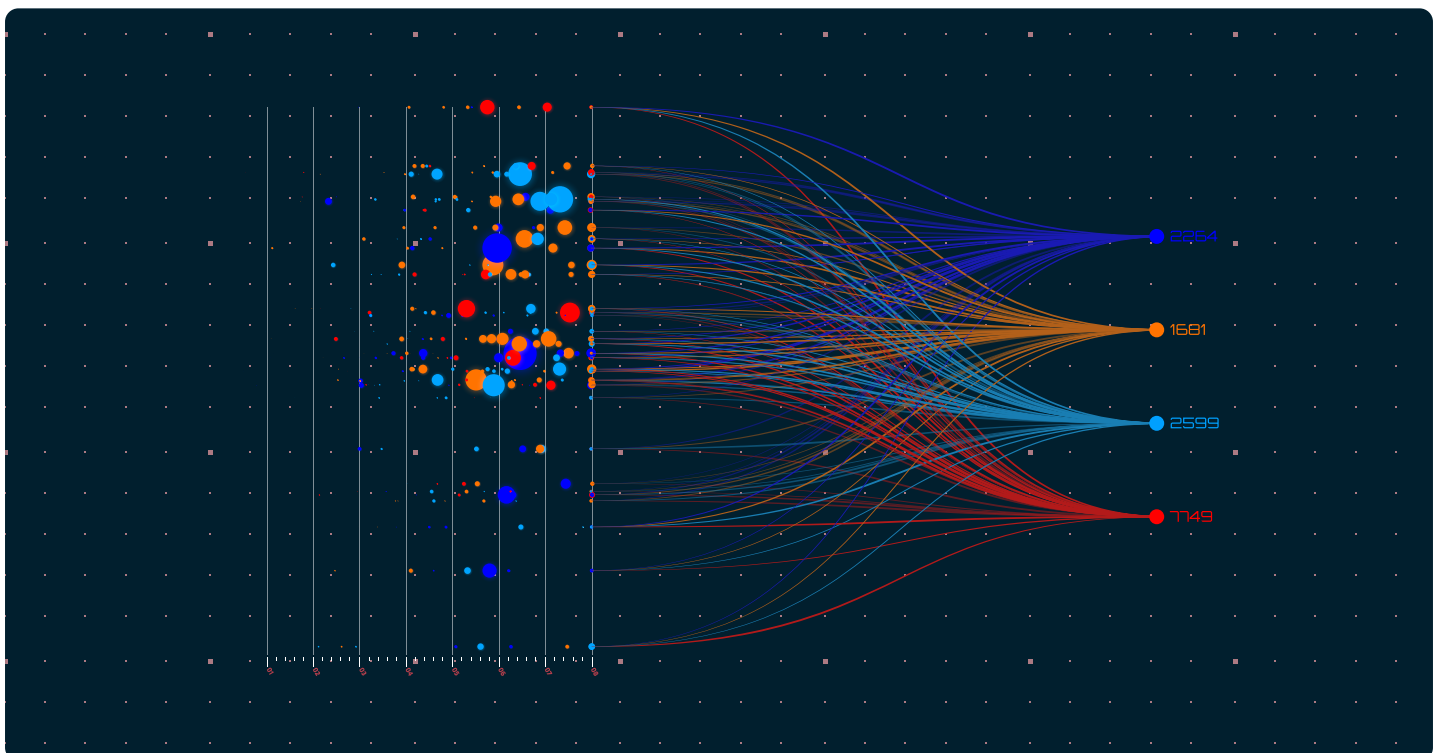## MODULE 2 : PYTHON FOR DATA SCIENCE

- Introduction to Data Science
- Working with Data Types and Operators in Python
- Writing Functions in Python
- Popular Data Science Packages in Python
- Advanced Functions
- Data Manipulation and Analysis with Pandas
- Data Visualization with Matplotlib
- Random Variables and Statistical Inferences
- Statistical Distributions and Hypothesis Testing
- Data Cleaning
- Exploratory Data Analysis
- Getting Started with Linear Algebra for Machine Learning

MODULE 3 : APPLIED DATA SCIENCE

- Data Engineering
- Data Storage
- Data Visualization
- Classification and Decision Trees
- Linear and non - linear regression
- Evaluating Data Models
- Time series analysis forecasting
- Clustering Models
- Exploratory Data Analysis
- Topic Model
- Text Analysis
- Social Network Analysis

> *There are two types of talent deficits: Data Scientists, who can perform analytics and Analytics Consultant, who can understand and use data. The talent supply for these job titles, especially Data Scientists is extremely scarce, and the demand is huge.*
>
> *– Srikanth Velamakann, Co-founder and CEO of Fractal Analytics*

LEARNING JOURNEY

ORIENTATION WEEK
The first week is orientation week. During this week you will be introduced to the other participants taking part in the programme. You will learn how to use the learning management system and other learning tools provided.

WEEKLY GOALS
On other weeks, you have learning goals set for the week. The goals would include completing the assignments, which have weekly deadlines.

FLEXIBLE & CONVENIENT ONLINE LEARNING
Learn online via recorded videos from top IIT Palakkad faculty in a high-impact 26-week journey with a learning commitment of 4 - 6 hours/week.

DEBRIEF SESSIONS
The programme features weekly online sessions with industry practitioners who are available to help you clarify your doubts pertaining to the content. Assignments are graded either by industry practitioners and/or by the Emeritus grading team.

TIMELY FOLLOW UP & LEARNING SUPPORT
The Emeritus Programme Support team will follow up over emails and phone calls with learners who are unable to submit their assignments on time.

WHAT IS THE PROGRAMME CERTIFICATE?

Certificate of completion will be awarded to participants who secure a minimum of 40% marks in the end-semester evaluation.
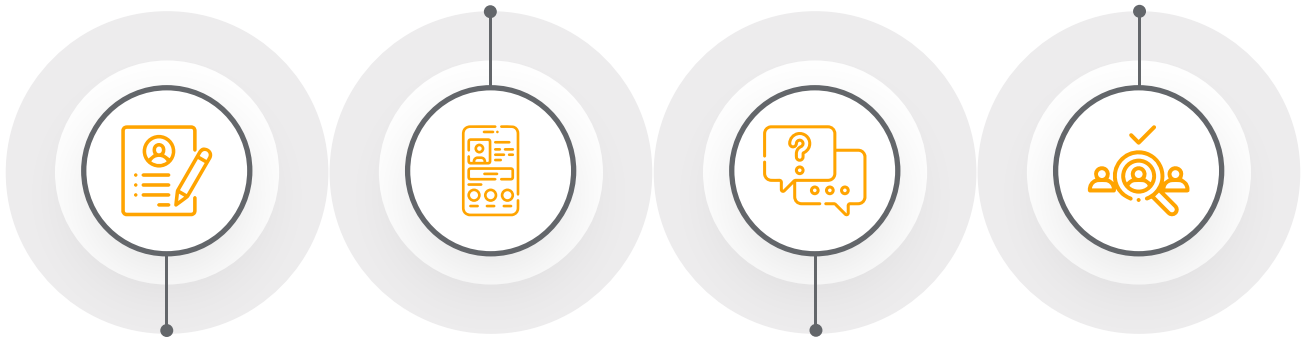

Note: All certificate images are for illustrative purposes only and may be subject to change at the discretion of IIT Palakkad.

EMERITUS CAREER SERVICES

Building an Impressive LinkedIn Profile (Group Session)

Job Placement Assistance

Building an Impressive Resume (Group Session)

Interview Preparation (Group Session)

- Three 90-minute workshops from career management industry experts

- Job placement assistance from partner companies are published, applied to, and tracked to success via an online platform

- Past participants of Emeritus work at Microsoft, ICICI Bank, Infosys, HDFC, AirBnB, TCS, Ola, Flipkart, JSW, Wipro, Honeywell, JP Morgan, Reliance Jio, Mahindra, Gartner, Accenture, Cognizant, amongst others

Please note:
- This service is available only for Indian residents enrolled into select Emeritus programmes.
- IIT Palakkad or Emeritus do NOT promise or guarantee a job or progression in your current job. Career Services is only offered as a service that empowers you to manage your career proactively. The Career Services mentioned here are offered by Emeritus. IIT Palakkad is NOT involved in any way and makes no commitments regarding the Career Services mentioned here.

PROGRAMME DETAILS

PROGRAMME START   June 22, 2022

APPLY BY   May 03, 2022

PROGRAMME FEE   INR 75,000 + GST

INSTALMENT SCHEDULE

	Remarks	Amount
Booking Amount	Within 7 days post selection	INR 21,000 + GST
Instalment I	Aug 17, 2022	INR 27,000 + GST
Instalment II	Sep 28, 2022	INR 27,000 + GST

Note:
- Admissions are on a first-come, first-serve basis. There might not be subsequent rounds if seats are filled in the initial rounds.

ELIGIBILITY

Any Graduate or Diploma Holder

PROGRAMME FORMAT

Online Video Lectures

PROGRAMME APPLICATION LINK

Click here to apply to the programme.
Finance options available. **Click here** to learn more.
For more information, please email at **iitpkd.execed@emeritus.org**

Note:
- In case a programme session corresponds with a public holiday, the session would be held on the following day.
- The actual programme schedule will be announced closer to the programme start.

ABOUT IIT PALAKKAD

Established in 2015, the Indian Institute of Technology Palakkad is dedicated to creating an environment that enables students and faculty to engage in the pursuit of knowledge, to dream, think and innovate thereby becoming an agent of change to better the world. Beginning with a humble student strength of 120 back in July 2015, IIT Palakkad has now grown into an establishment which is 1000 students strong with the best of manpower in its key positions. IIT Palakkad targets to become a multi-disciplinary institution with a population of 5000 students in 10 years. IIT Palakkad recognizes collective growth, in collaboration with industry and other academic institutions, as the need of the time and emphasizes blue-sky research and directed research as two essential pillars of technology development. IIT Palakkad embraces a vision to be a leader in cross-disciplinary inquiries which is embodied in the tagline of the institute **"Nurturing minds for a better world"**.

ABOUT EMERITUS

Indian Institute of Technology Palakkad is collaborating with online education provider Emeritus to offer a portfolio of high-impact online programmes. Working with Emeritus gives Indian Institute of Technology Palakkad the advantage of broadening its access beyond their on-campus offerings in a collaborative and engaging format that stays true to the quality of Indian Institute of Technology Palakkad. Emeritus' approach to learning is built on a cohort-based design to maximise peer-to-peer sharing and includes video lectures with world-class faculty and hands-on project-based learning. More than 250,000 students from over 160 countries have benefitted professionally from Emeritus' courses.

Apply for the programme here

APPLY NOW

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For registration and any other information,
please get in touch with us at **iitpkd.execed@emeritus.org**

🟢 **WhatsApp an Advisor On +91 7208889990***

* This number does not accept any calls. Please message your queries.

In collaboration with

E EMERITUS

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