



5-day Faculty Development Programme THEORETICAL MACHINE LEARNING 27-31, May 2024

Organized by
Department of Computer Science and Engineering
Indian Institute of Information Technology Kottayam

About IIIT Kottayam

Indian Institute of Information Technology, Kottayam at Valavoor, Pala, Kerala is one among the IIITs that have been established as "Institution of National Importance" by Ministry of Education, Govt. of India under the ambit of IIIT PPP act 2017. IIIT Kottayam campus is situated at Valavoor, Pala, Kottayam- a picturesque location, spread over in 53 acres of land - allotted by Govt. of Kerala in the southern part of the Country commonly referred to as God's Own Country. The institute offers 4 year B.Tech, and B.Tech (Hons), programs in Computer Science and Engineering, Artificial Intelligence, Cyber Security and Electronics and Communication. The institute also offers M.Tech (3 years), integrated M.Tech (6 years) for working professionals and PhD programmes in all major areas of CSE, Data Science and Electronics.

About the FDP

Our Faculty Development Programme is meticulously designed to address the critical need for a strong theoretical foundation in machine learning concepts. In today's rapidly evolving landscape, where machine learning plays an increasingly pivotal role across various domains, a profound theoretical understanding is imperative. Participants will delve into Mathematical Foundations such as Linear Algebra and Probability and Statistics, enabling them to grasp the underlying principles governing machine learning algorithms. With a comprehensive grasp of Computational Learning Theory, including VC Dimension and PAC Learning, participants will be empowered to analyze and innovate within the field. Moreover, exploring Feature Selection and Engineering techniques like PCA and LDA underscores the significance of theoretical insights in practical applications. By fostering a deep understanding of these concepts, our programme equips participants to tackle real-world challenges and contribute meaningfully to the advancement of machine learning research and education.

Topics Covered

- Mathematical Foundations- Linear Algebra, Probability & Statistics
- Computational Learning Theory- VC Dimension, PAC Learning
- Feature selection and Engineering - PCA, LDA
- Linear Models
- Probabilistic Models
- Neural networks
- Kernel Regression and Neural Tangent Kernel

Resource Persons

- Prof. K P Soman, Dean, School of AI, Amrita University
- Dr. Jidesh, NIT Surathkal
- Dr. Sumitra, IIST Trivandrum
- Dr. Ajeesh Ramanujan, Associate Prof, College of Engg, Trivandrum
- Dr. Jayakrushna Sahoo, IIIT Kottayam
- Dr. Selvi C, IIIT Kottayam
- Dr. Manu Madhavan, IIIT Kottayam

Target Audience

- Faculty members
- PG/PhD scholars interested in Machine Learning
- UG Final year students

Important Dates

- Registration opens: 08-April-2024
- Last Date of Registration: 20-May-2024
- FDP Dates: 27-31 May-2024

Registration Fee

- Rs 1500/-
- Registration fee includes working lunch, refreshments and registration kit

Procedure for Registration

1. Step-1: Fee payment

- Go to SBI Collect: <https://www.onlinesbi.sbi/sbicollect/icollecthome.htm>
- Select "Educational Institutions"
- Search for Payee "IIIT Kottayam" and click on it
- Payment Category – Select "TML FDP"
- Enter the details and make payment

2. Step-2: Registration

- Go to the form <https://forms.gle/bnRwuQGh16ycPLuG6>
- Fill the details

Venue

(Offline)
IIIT Kottayam,
Valavoor P O, Pala
Kottayam, Kerala

Accommodation

Shared accommodation at institute will be provided on payment basis.

Contact

- **Coordinators**
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