



# Probabilistic Graphical Models in Machine Learning

## Name of the PMRF student

Prateek Chanda

## Required background of the students taught

Discipline(s) : BE/BTech/ME/Mtech in any disciplines  
Pre-Requisites: Math and Probability basics, ML Basics

## Online session coordinator

Will be chosen from the list of registrants



## Details of the content of the module

**Week 1** : Probability Basics and Introduction to ML

**Week 2** : Maximum Likelihood, MAP estimate, Linear Regression

**Week 3**: Loss Functions and ML Basics wrap up

**Week 4** : Problem Solving Quiz

**Week 5**: Intro to Graphical Models (Bayesian Networks)

**Week 6** : Intro to Undirected graphical models

**Week 7**: Learning in Graphical Models

**Week 8**: Inference in Graphical Models

**Week 9**: Problem Solving Quiz

**Week 10**: Diffusion Models

**Week 11**: Gaussian Processes

**Week 12**: Problem Solving Quiz

**Week 13**: Bayesian Optimization

**Week 14**: VAEs and GANs

**Week 15** : Problem Solving Quiz

**Week 16**: Normalizing Flows

## Schedule of the module

May20th - Sept 11th

Saturday and Sunday (3:30 to 5 pm)

Lecture and Problem Solving

Meeting link : Will be shared later

[Link](#)

Contact email ID: [issforum@gmail.com](mailto:issforum@gmail.com)

Registration link:

<https://forms.gle/ZRyew22qTcTk7V8R7>

