



Module PMRF-ISSS076/2022

Generative Modelling using VAEs

Name of the PMRF student

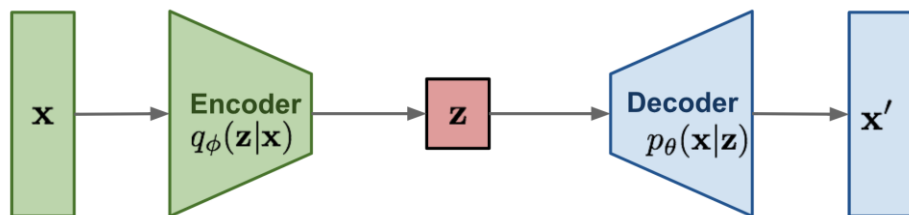
Raj V Jain

Required background of the students taught

Basics of Linear Algebra, Probability and Backpropagation would be required

Online session coordinator

Will be chosen from the list of registrants



[img source](#)

Details of the content of the module

Contents

1. Basics of Random Variables
2. Jensen's Inequality
3. KL Divergence
4. Vector Random Variables
5. Gaussian distribution and why we like it so much
6. Some sampling strategies
7. Generative Modelling Problem Statement
8. Variational Inference and VAEs
9. Issues in VAEs and solutions in literature
10. Conditional VAEs formulation
11. (Bonus) Implementation in PyTorch
12. (Bonus) A peek at GANs

Slow paced course. It will be held in Teams and will be recorded. All written material and recordings will be made available.

Schedule of the module

Saturdays from 3 PM – 5 PM

Starting May 27, 2023

Ending Aug 12, 2023 (Tentative)

Total Hours: 24 (Tentative)

Meeting link : Will be shared later

[Link](#)

Contact email ID: issf.forum@gmail.com

Registration link:

<https://forms.gle/GtagDzErJCkh8raHA>