

Inter IIT tech meet preparation

Computer Vision

Task 1

Goal:

Participants must develop a deep learning solution that achieves at least **90% accuracy** on the **MNIST handwritten digit recognition dataset**. The task encourages exploration of different models, techniques, and pre-processing strategies.

Dataset Details:

- Dataset: MNIST Handwritten Digit Dataset

Task Requirements:

Well-commented source code

- Clearly explain each major step: preprocessing, model selection, training, evaluation, etc.
- Python is recommended, but any language is allowed.

Two-page report (PDF)

- Overview of the approach
- Techniques/models used and why
- Preprocessing steps
- Challenges faced and how they were overcome
- Accuracy achieved and key observations

Minimum Requirement: Accuracy must be $\geq 90\%$

Rules & guidelines:

- You are free to explore different approaches.
- No Plagiarism. Any copied code will lead to 0 points.
- Maintain modular, clean and readable code with meaningful comments.
- Submission must be done under deadline else penalties will be imposed.
- Submission should be in a zip file containing code and report.

Evaluation:

- Accuracy - 60
- Code quality and clarity - 20
- Report clarity and insights - 20

Submission date - 06/06/2025