Progress report of Week 1

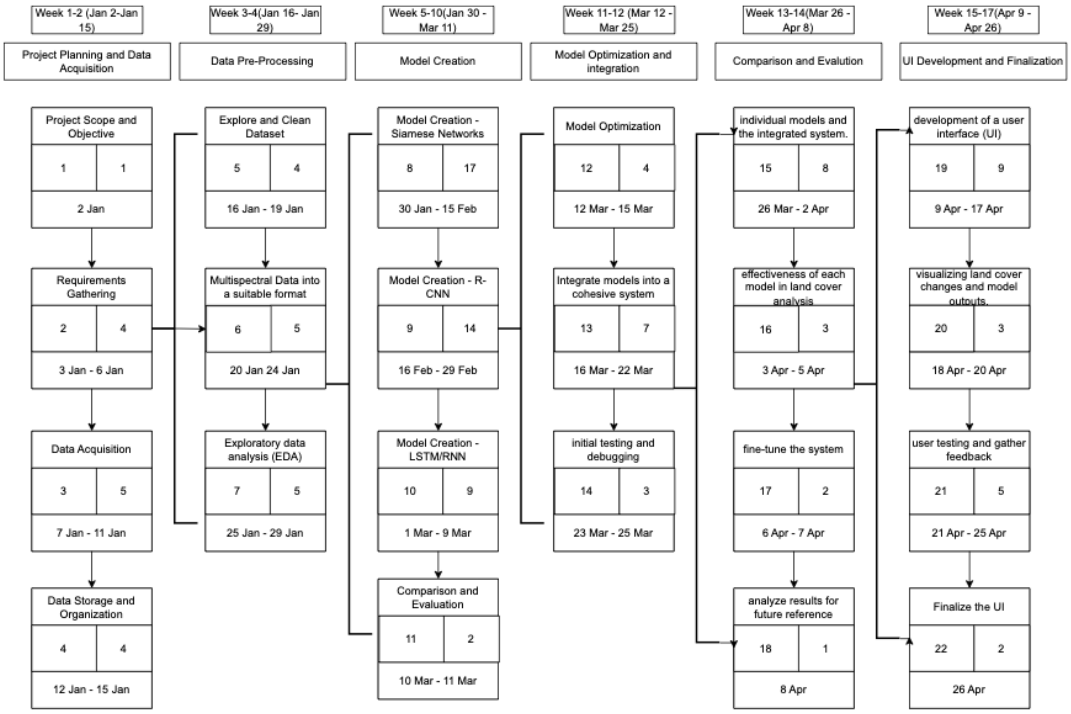
Duration: 02/01/2024 to 08/01/2024

To be filled by Students	
Project Title finalized, if Yes, give name, if NO, give reason	Multispectral Land Cover Analysis and Change Detection for Assessing Environmental Dynamics
Synopsis submitted	Yes
Literature review	Yes
Technical & Economical Feasibility	GPU required
Bill of Material	NA
Design of components	NA
Fabrication work (give %)	NA
Experimental work (give %)	10%
Result and Analysis	Understood how to proceed with model creation and the processing requirements of task. Read and understood how the data must be pre-processed for input and handling in the networks. Understood how Siamese networks can be employed for the purpose.
Report writing	Created a rough draft for "Introduction" and "Methodology" sections of report.

Work done in this week:

- Explored viable options deep learning models that can replace traditional methods of change detection.
- Curated the following.
    - Recurrent-CNN
    - Time series models like RNN & LSTM
    - Siamese Network
    - Other RNN/LSTM variants
- Studied basics about Siamese Network and its architecture.
- Explored how Siamese Network accepts and handles data.
- Initialized the Graphics Processing Unit on local device with TensorFlow and PyTorch.
- Studied the loss functions for Siamese network.

PERT Chart



- Signature of Student: Nayan R. day

To be filled by Guide (strike off whichever is not applicable)

Performance of students is satisfactory/ Unsatisfactory				
A warning to be issued to student(s)				

Feedback given to students on current progress

Task assigned for next week	• Develop a script for preprocessing the data. • Build preliminary model structure
Date Signature of Guide	