**3. Task Assignment & Roles – Defined responsibilities for team members**

**Task Assignment & Roles: Land Type Classification using Sentinel-2 Satellite Images**

**1. Data Scientists:**

* **Responsibilities**:
  + Collect and preprocess Sentinel-2 satellite images.
  + Perform exploratory data analysis (EDA) and feature engineering.
  + Develop and train the DNN model using TensorFlow or PyTorch.
* **Tasks**:
  + Download and clean the dataset.
  + Perform EDA and generate visualizations.
  + Implement and optimize the DNN model.

**2. Machine Learning Engineers:**

* **Responsibilities**:
  + Select and fine-tune machine learning models.
  + Evaluate model performance using metrics like accuracy, precision, and recall.
  + Deploy the model as a web service or API.
* **Tasks**:
  + Experiment with different model architectures (e.g., CNN, ResNet, VGG).
  + Perform hyperparameter tuning and model evaluation.
  + Deploy the model using Flask, FastAPI, or Django.

**3. DevOps Engineer:**

* **Responsibilities**:
  + Set up the deployment pipeline on cloud platforms (e.g., AWS, Google Cloud).
  + Implement monitoring tools to track model performance.
  + Ensure scalability and reliability of the deployed model.
* **Tasks**:
  + Deploy the model on a cloud platform.
  + Set up monitoring and alert systems for model performance.
  + Document the deployment and monitoring process.

**4. Project Manager:**

* **Responsibilities**:
  + Coordinate between team members and stakeholders.
  + Ensure timely delivery of milestones and deliverables.
  + Communicate project progress and challenges to stakeholders.
* **Tasks**:
  + Create and maintain the project timeline.
  + Organize team meetings and progress reviews.
  + Prepare final documentation and presentations.