**Project Plan: Land Type Classification using Sentinel-2 Satellite Images**

**1. Timeline (Gantt Chart):**

| **Task** | **Start Date** | **End Date** | **Duration** |
| --- | --- | --- | --- |
| Milestone 1: Data Collection, Exploration & Preprocessing | Week 1 | Week 4 | 4 weeks |
| Milestone 2: Advanced Data Analysis & Model Selection | Week 5 | Week 8 | 4 weeks |
| Milestone 3: Model Development & Training | Week 9 | Week 12 | 4 weeks |
| Milestone 4: Deployment & Monitoring | Week 13 | Week 16 | 4 weeks |
| Milestone 5: Final Documentation & Presentation | Week 17 | Week 18 | 2 weeks |

**2. Milestones and Deliverables:**

| **Milestone** | **Deliverables** |
| --- | --- |
| Milestone 1 | EDA Report, Cleaned Dataset, Visualizations |
| Milestone 2 | Data Analysis Report, Model Selection Summary, Visualizations |
| Milestone 3 | Model Code, Training and Evaluation Reports, Final Model |
| Milestone 4 | Deployed Model, Monitoring Setup, MLOps Report |
| Milestone 5 | Final Project Report, Final Presentation |

**3. Resource Allocation:**

* **Data Scientists**: 2 (for data collection, preprocessing, and model development)
* **Machine Learning Engineers**: 2 (for model training, optimization, and deployment)
* **DevOps Engineer**: 1 (for deployment and monitoring setup)
* **Project Manager**: 1 (for overall project coordination and stakeholder communication)