

Project Proposal & Development Plan

Team / Organization Name

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0.1 Project Summary

0.1.1 Scope

Development of an end-to-end machine learning system for forecasting solar power generation.

0.1.2 Objectives

- Build a reliable regression model
- Implement CI/CD pipelines
- Enable monitoring and governance

0.1.3 Relevance

The project supports renewable energy optimization and sustainable power management.

1 Deliverables

- Data ingestion and preprocessing pipeline
- Trained ML model
- REST API for inference
- CI/CD automation
- Monitoring dashboard

1.1 Milestones

1. Dataset analysis completed
2. Baseline and advanced models trained
3. Deployment pipeline implemented
4. Monitoring activated

1.2 Work Breakdown Structure

1.2.1 Project Manager

- Planning and coordination
- Risk management
- Documentation oversight

1.2.2 Data Analyst

- Exploratory data analysis
- Feature engineering
- Baseline model evaluation

1.2.3 Developer

- Model implementation
- API development
- CI/CD configuration

1.3 Sprint Plan

Sprint	Activities
Sprint 1	Requirements and data analysis
Sprint 2	Model development
Sprint 3	Deployment and CI/CD
Sprint 4	Monitoring and documentation

1.4 Definition of Ready (DoR)

- Dataset available
- Requirements approved

1.5 Definition of Done (DoD)

- KPIs achieved
- Reproducible pipeline
- Complete documentation

1.6 Resources and Infrastructure

- GitHub for version control
- Docker for containerization
- Python, scikit-learn, FastAPI
- Cloud or local VM infrastructure