ML Spring 2025 Plan

Select a period to highlight at right. A legend describing the charting follows.

Period Highlight:	3

Legend: Plan Duration · Actual Start · % Complete · Actual (beyond plan) · % Complete (beyond plan)

ACTIVITY	PLAN START	PLAN DURATION	ACTUAL START	ACTUAL DURATION	PERCENT COMPLETE
Dataset Collection & Review: HMDA, Loan Approval Prediction, Lending Club	1	2	1	2	100%
Proposal Preparation	2	2	2	2	100%
Data Cleaning & Preprocessing: Fair Encoding, Causal Inference, SMOTE, Normalization	4	2	4	2	0%
Feature Engineering: Mutual Information-Based Selection	4	2	4	2	0%
Model 1 (Supervised - Logistic Regression): Implementation & Evaluation	5	3	5	3	0%
Model 2 (Unsupervised - SOM + Classifier): Implementation & Evaluation	5	3	5	3	0%
Fairness Adjustment: Adversarial Training to Reduce Bias	7	3	7	3	0%
Initial Evaluation: Confusion Matrix, Precision, Recall, Accuracy	6	2	6	2	0%
Midterm Report Submission: GitHub Updates + Contribution Table	7	1	7	1	0%
Model 3 (Supervised - SGD): Implementation & Evaluation	8	2	8	2	0%
Advanced Model Tuning: Hyperparameter Optimization for SGD and SOM models	9	2	9	2	0%
Fairness Metrics Evaluation: Assess Demographic Disparities Using Appropriate Fairness Metrics	9	2	9	2	0%
Cross-Dataset Validation	9	2	9	2	0%
Model Comparison: Trade-Off Analysis on Accuracy, Fairness, and Interpretability	10	2	10	2	0%
Ethical Review: Focus on Fairness, Bias Correction, and Socioeconomic Impact	10	2	10	2	0%
Final Report Completion: Comprehensive Model Analysis + Visualizations	11	2	11	2	0%
Final Presentation Preparation: Visualizations + Key Insights	11	2	11	2	0%
Final Presentation & Q&A: 9-Minute Presentation + 3-Minute Q&A	12	1	12	1	0%
GitHub Repository Final Updates: Code, Visualizations, Updated README.md	12	1	12	1	0%
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