Phase-1: Applied Machine Learning Daily Checklist (Day 1 – Day 28)

Goal: Become interview-ready in applied ML and prepare for MLOps.

Daily Time: 2–2.5 hours

Week 1 – ML Foundations

- Day 1: Environment setup, ML overview, install libraries
- Day 2: Train/Test split, baseline models
- Day 3: Bias vs Variance, underfitting/overfitting
- Day 4: Cross-validation (K-Fold)
- Day 5: ML Pipelines and ColumnTransformer
- Day 6: Code refactor and revision
- Day 7: Interview self-test (foundations)

Week 2 – Feature Engineering

- Day 8: Missing value handling
- Day 9: Categorical encoding strategies
- Day 10: Feature scaling techniques
- Day 11: Feature importance methods
- Day 12: Data leakage detection and prevention
- Day 13: EDA for ML
- Day 14: Interview self-test (features)

Week 3 – Core ML Algorithms

- Day 15: Linear Regression + Regularization
- Day 16: Logistic Regression + thresholds
- Day 17: Decision Trees
- Day 18: Random Forest
- Day 19: XGBoost
- Day 20: Model comparison
- Day 21: Interview self-test (models)

Week 4 – Evaluation & Mini Project

- Day 22: Classification metrics

- Day 23: ROC-AUC and threshold tuning
- Day 24: Handling class imbalance
- Day 25: Dataset selection & repo setup
- Day 26: End-to-end training
- Day 27: Model explainability
- Day 28: Project polish & GitHub push

Exit Criteria: You can explain model choice, prevent leakage, evaluate models correctly, and are ready for MLOps.