Day 1: Introduction

* Read T1 - Chapter 1: Introduction
  + Objectives: Understand the basic concepts of machine learning, its applications in various domains, and the significance of machine learning in solving real-world problems.
  + Exercises:
    1. Research and write a short summary of three different real-world applications of machine learning.
    2. Identify and discuss the ethical considerations related to the use of machine learning in decision-making processes.

Day 2: Machine Learning Workflow

* Read R2 - Chapter 2: Probability Distributions
* Read R2 - Chapter 3: Linear Models for Regression
  + Objectives: Learn about probability distributions, data pre-processing techniques, and linear models for regression.
  + Exercises:
    1. Practice calculating probabilities and working with probability distributions.
    2. Implement linear regression using a programming language of your choice and apply it to a simple dataset.

Day 3: Linear Models for Regression (Part 2)

* Continue reading R2 - Chapter 3: Linear Models for Regression
  + Objectives: Deepen your understanding of linear models for regression, including the concepts of bias-variance decomposition.
  + Exercises:
    1. Solve exercises from the end-of-chapter section of R1 - Chapter 3 to practice applying linear regression techniques.
    2. Implement regularized linear regression (e.g., Ridge Regression or Lasso Regression) and compare its performance with ordinary linear regression.

Day 4: Linear Models for Classification

* Read R1 - Chapter 4: Linear Models for Classification
  + Objectives: Explore different linear models for classification, including discriminant functions, decision theory, and logistic regression.
  + Exercises:
    1. Work through the example problems provided within the chapter to understand the concepts better.
    2. Implement logistic regression from scratch or using a machine learning library and apply it to a binary classification problem.

Day 5: Decision Tree

* Read T1 - Chapter 3: Decision Trees
* Read R2 - Chapter 3: Linear Models for Classification (Decision Trees)
  + Objectives: Learn about decision trees, information theory, entropy-based decision tree construction, and techniques to handle continuous valued attributes and missing attributes.
  + Exercises:
    1. Construct a decision tree manually for a given dataset and calculate the information gain at each step.
    2. Implement a decision tree algorithm (e.g., ID3, C4.5, or CART) using a programming language and apply it to a classification problem.

Day 6: Instance-based Learning

* Read T1 - Chapter 8: Instance-based Learning
  + Objectives: Understand instance-based learning, including k-Nearest Neighbor (k-NN) learning, locally weighted regression (LWR) learning, and radial basis functions.
  + Exercises:
    1. Implement the k-NN algorithm and apply it to a classification problem.
    2. Experiment with different values of k and observe their impact on the performance of the k-NN algorithm.

Please note that the exercises provided are general suggestions, and you can modify or expand upon them based on your preferences and available resources. Additionally, I recommend referring to the lecture notes you mentioned and exploring other resources that align with the topics you're studying.

Remember to adapt the study plan according to your own pace, allocate time for practice, and revise previously covered material regularly