COURSE OBJECTIVE

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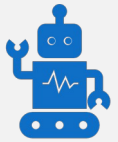
PHILIP JESS TEINING

OBJECTIVES

Gain a workable knowledge of Python with focus on working with data.



Apply fundamental machine learning (ML) techniques in practical contexts.

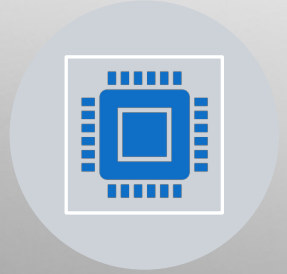
Understand the fundamental theory of ML.

Implement basic ML tasks using state of the art Application Programming Interfaces (APIs) and tools.

CENTRAL GOALS

Knowledge of programming basics in Python.

Introduction to the ML landscape in terms of supervised learning, unsupervised learning and reinforcement learning.



Fundamental tools and techniques in Python for ML, including neural networks and deep learning.

Frameworks and APIs for ML based on Python.

CORE OBJECTIVES

1. **Python Fundamentals:**
    - Gain proficiency in core Python programming concepts.
    - Understand data structures, control flow, and functions.
2. **Data Wrangling with Python:**
    - Utilize Pandas for data exploration, cleaning, and manipulation.
    - Visualize data effectively with Matplotlib.
3. **Machine Learning Landscape:**
    - Explore the diverse world of ML algorithms and techniques.
    - Understand the differences between supervised, unsupervised, and reinforcement learning.

CORE OBJECTIVES

4. Data Challenges in ML:

- Identify and address common data issues like missing values, noise, and imbalanced datasets.

5. Model Building & Evaluation:

- Implement key ML algorithms (linear regression, decision trees, random forests, etc.) using Python.
- Split data into training and testing sets for model development.
- Apply feature scaling techniques.
- Evaluate model performance with relevant metrics.

6. Hands-On Practice:

- Reinforce learning through practical exercises and projects.
- Gain confidence in applying ML concepts to real-world scenarios.

WHY THIS COURSE?

- Combines theoretical understanding with hands-on experience
- Focuses on practical skills for solving real-world problems
- Provides a comprehensive foundation in machine learning with Python

COURSE PLAN

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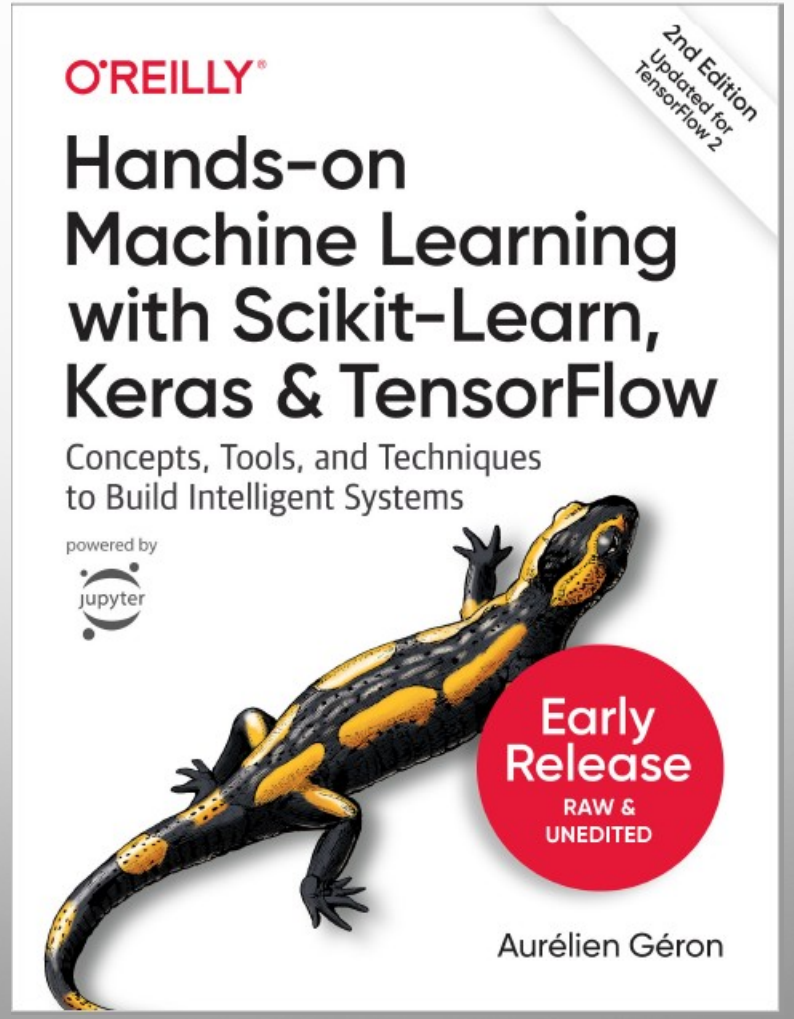
READING MATERIAL



EVALUATION