KAUST-AI Introduction Study Guide

This study guide is designed to help you effectively navigate and master the KAUST-AI Introduction course. Follow the outlined plan for an in-depth understanding of core AI concepts through lectures, slides, and hands-on practice.

Phase 1: Drag Club Course

Goal: Build a strong foundation with practical coding exercises.

Timeline

- **Duration**: 3 to 4 days
- **Session Length**: Approximately 2 hours and 40 minutes per lecture

Daily Plan

1. **Day 1**: Watch Lecture (https://youtu.be/rqMy9tx3yB8?si=83KdD-gNwFYlJEJj)
2. **Day 2**: Watch Lecture (https://youtu.be/x3Q89nVn9zc?si=UwS8RXrXaE74Z5Bx)
3. **Day 3**: Watch Lecture (https://youtu.be/YVw5PmyjUpo?si=if695EZpjbUmnuD8)
4. **Day 4**: Watch Lecture (https://youtu.be/pMv-75zsZew?si=kS5vDMFuX9toAUGD)

Focus Areas

- Take detailed notes during lectures.
- Practice code implementation for key topics.
- Maintain full concentration to ensure retention.

Phase 2: Slides Review

Goal: Reinforce theoretical knowledge with slides and additional materials.

Timeline

- **Duration**: 2 to 3 days

Key Topics and Resources

1. **Linear Regression**: Slides (https://drive.google.com/file/d/1tQBwISpuHXeLtyjdb6Q9gZkscjZTgxGl/view?usp=drive_link)
2. **Logistic Regression**: Slides (https://drive.google.com/file/d/15WIGcKw2u2GCHCWzQlzQ8_fa0Zwjqox_/view?usp=drive_link)
3. **Neural Networks**: Slides (https://drive.google.com/file/d/1imR4rVUenbMa52wwAOvJ5IGSvctwoFiw/view?usp=drive_link)
4. **Machine Learning Applications**: Slides (https://drive.google.com/file/d/1O_vnyjETk0TJYoGLghuUv3GftA08lmQO/view?usp=drive_link)

Additional Tasks

- Focus on reviewing the final slides for summary insights.
- Explore **Prof. David's GitHub repository** and other relevant GitHub repositories for supplementary examples.
    - **GitHub Repository (Week 3 & 4)**: Link (https://github.com/A-EL-YAAGOUBI/Introduction-AI/tree/main)

Phase 3: Practice and Review

Goal: Solidify knowledge and prepare for assessments.

Timeline

- **Duration**: 2 to 4 days

Focus Areas

1. Practice using old exam files. Train extensively to simulate real-world.
2. Revisit slides to reinforce understanding of concepts and examples.
3. Conduct self-assessments to identify and address weak areas.

Study Tips

- Allocate distraction-free time blocks for studying.
- Use a combination of coding, note-taking, and self-testing to maximize retention.
- Reach out to peers or mentors for clarifications on challenging topics.

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