Deep Learning Spring 2025: Course Highlights

GitHub repository:

AbdullahFaiza/Deep-Learning-Spring-2025

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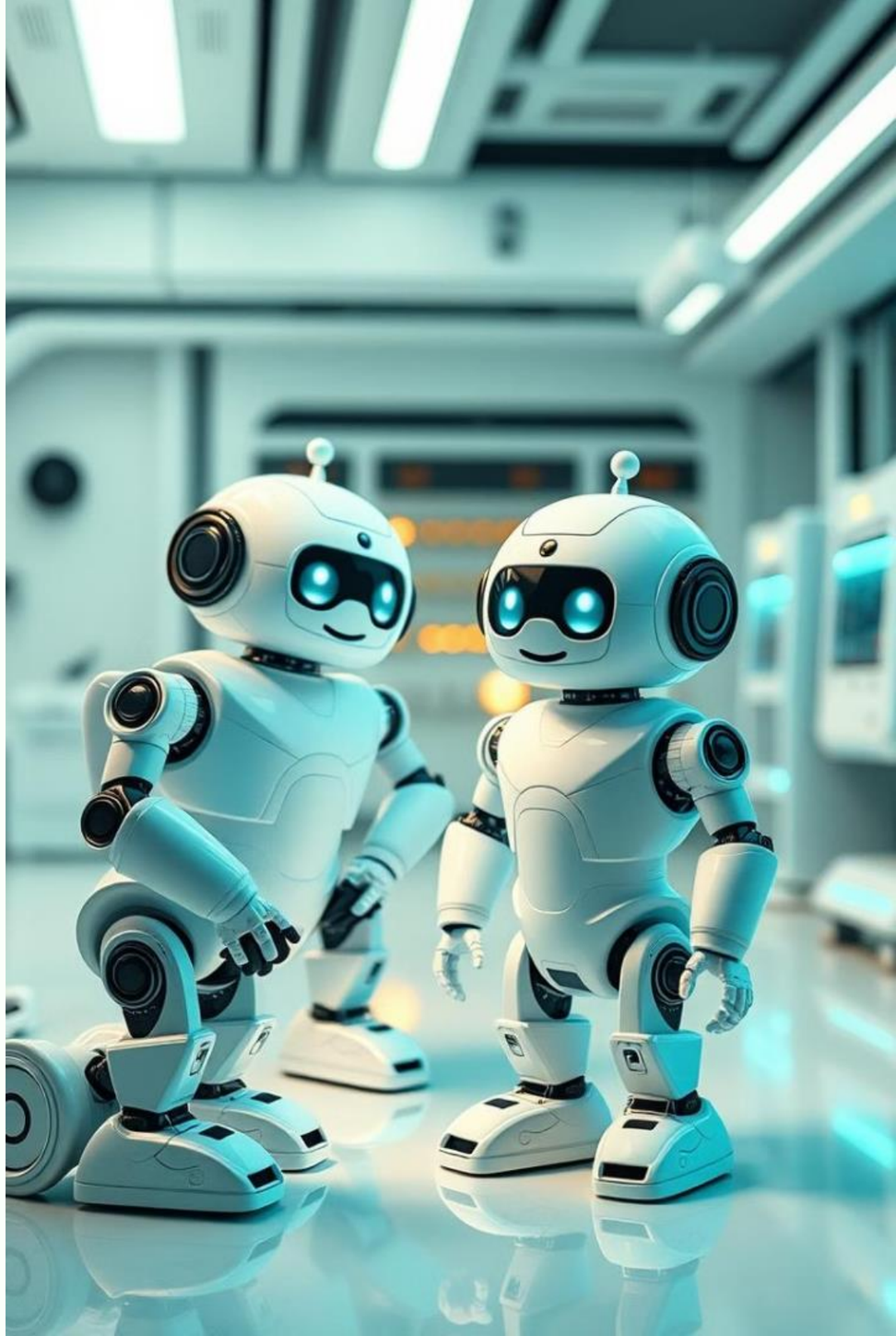


Capstone Project: Resea (Virtual Research Agent)

Project Overview

Completed entirely on Google Colab.

Azure Limitations

Colab used due to Azure orientation and credit issues.

Key Takeaway

Strong adaptability and problem-solving skills shown.

Midterm Deep Dive: Image Generation with Diffusion Models

Midterm Focus

Creating images with diffusion models

- Used CIFAR-10 dataset for training
- Hands-on implementation of complex models

Skills Demonstrated

- Gained hands-on experience with image generation techniques.
- Learned how diffusion models can enhance creativity in AI-generated art.
- Practical understanding of how image processing can be integrated into Deep Learning workflows.

Preparing for the Future: AWS & AI-900 Prep Labs

AWS Labs

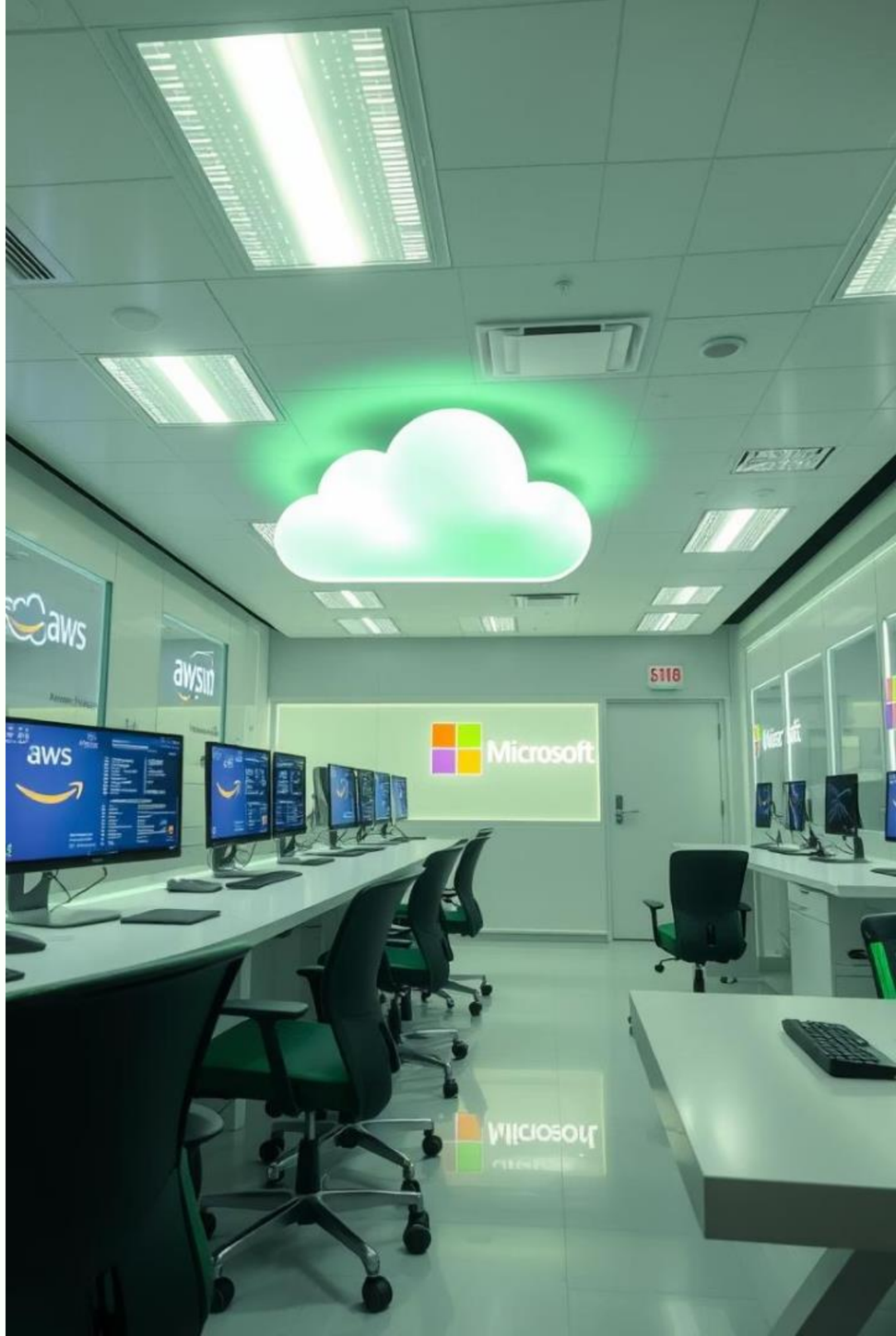
Hands-on experience with cloud AI deployments.

AI-900 Prep

Focused on Microsoft AI Fundamentals certification.

Skills Acquired

Practical model deployment and cloud integration.



Creative Assignment 4

1

Explain Tensors to an 11-Year-Old

2

Creative Formats

- Developed a song
- Created an animated video
- Designed a comic strip

3

Outcome

Deep understanding meets innovative communication.

Beyond the Highlights: A Rich Learning Experience

Diverse Assignments

Covered data manipulation, model training, evaluation.

Comprehensive Coverage

Built broad, practical deep learning skills.

Repository Resources

Extensive notebooks and datasets available.

Course Repository Structure: A Quick Tour

Organized by Module

Clear assignment and resource layout.

Complete Materials

Includes notebooks, datasets, and documentation.

Self-Directed Learning

Encourages exploration beyond assigned tasks.

Deep Learning Spring 2025: Key Takeaways

Hands-On Experience

Practical use of advanced deep learning techniques.

Creative Problem Solving

Innovative approaches to communicating complex ideas.

Continuous Learning

Comprehensive repository supports ongoing growth.