

Practical Image Processing and Natural Language Processing

Lecture Intro

Prepared by
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Who am I?

Hager Saleh Mohammed Ahmed

About me

Assistant Professor at the Artificial Intelligence Department at Midocean University

Educational Degrees

Ph.D. from Faculty of Computer and Information , Minia University

Ph.D's thesis title: Efficient Predictive Analytics using Big Data Platforms

M. Sc. From Aswan University

Bachelor from Faculty of Computer and Information, Assiut University.



Course topics

Course includes two main topics:

- Foundations and Applications of Image Processing and Classification
- Foundations and Practical Applications of Natural Language Processing

The topic objectives

1. Installing the main environment for the practical applications.
2. Understanding the basic concepts of images.
3. Applying data augmentation methods using Keras and PyTorch to enhance model generalization.
4. Developing and training deep learning models using PyTorch and TensorFlow.
5. Reducing image size.
6. Studying different evaluation methods for models of image classification.
7. Implementing different projects

The topic objectives:

1. Installing the main environment for the practical application.
2. Understanding the basic concepts of NLP.
3. Studying the main pre-processing steps of NLP.
4. Implementing different vector representation techniques.
5. Handling an imbalanced dataset.
6. Applying machine learning to NLP.
7. Applying deep learning to NLP.
8. Studying different evaluation methods for models of NLP.
9. Implement different projects for the Arabic and English languages



Projects

Projects	Due Week	Degree
Project 1	Week 5	50%
Project 2	Week 10	50%



Thank You