TRAINING COURSE

ARTIFICIAL INTELLIGENCE APPLICATIONS IN STRUCTURAL ENGINEERING

Introduce programming paradigms and artificial intelligence concepts not covered in traditional structural engineering courses. This 4-week course is designed for students, engineers, and researchers. Stimulating weekly sessions will introduce software development with Python, automation of finite element models, and AI-assisted simulation of structural design.

The BRITISH UNIVERSITY IN EGYPT | SCE SCHOOL OF CONTINUING EDUCATION | FACULTY OF ENGINEERING

Faculty of Engineering,
The British University in Egypt.

Dates
July 9th to August 3rd 2023

Training Type
Face to Face Practical Digital Implementation

Time
10am to 3pm
(break 12pm to 1pm)

INSTRUCTORS

Dr. Shady Salem

Dr. Ahmed A. Torky

APPLY NOW!

https://forms.gle/gtKE3xZiNdcD6vkL8

TARGET AUDIENCE

1. Undergraduates with basic knowledge of structural analysis.
2. Post-graduates of engineering background.
3. Engineers and industrial practioners interested in applications of AI.

COURSE OBJECTIVES

1. Basic understanding for finite element software, namely, SAP2000.

2. Introduce programming with Python.

3. Learn how to link SAP2000 with Python.

4. Optimize parameters using structural analysis tools via Python.

5. Learn AI methods, such as supervised and unsupervised learning, regression analysis, and evolutionary algorithms.

BRIEFLY

Programming with Python, Integration with Structural Analysis tool, and AI methods!

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Week One
Basics of SAP2000
Python Programming

Week Two
Linking Python and SAP2000
Parametric Investigations

Week Three
AI Methods
(Neural networks, regression analysis, evo. algorithms)

Week Four
Project
Optimization of Structural Parameters using AI

COURSE FEES:
4,000 EGP
INSTEAD OF
4,500 EGP
BEFORE 13/6

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WHY ATTEND

The training will provide participants with the fundamentals stated above, which will be reinforced with hands-on examples to boost confidence in utilizing ML in their applications beyond the training. The course presents a novice-level application for AI in structural engineering; therefore, we encourage students and engineers from various disciplines to attend this course.