

*November 2023 Training Course:*

*Artificial Intelligence Applications in Structural Engineering*

Week 1: **Simple Data Science Python - 04**

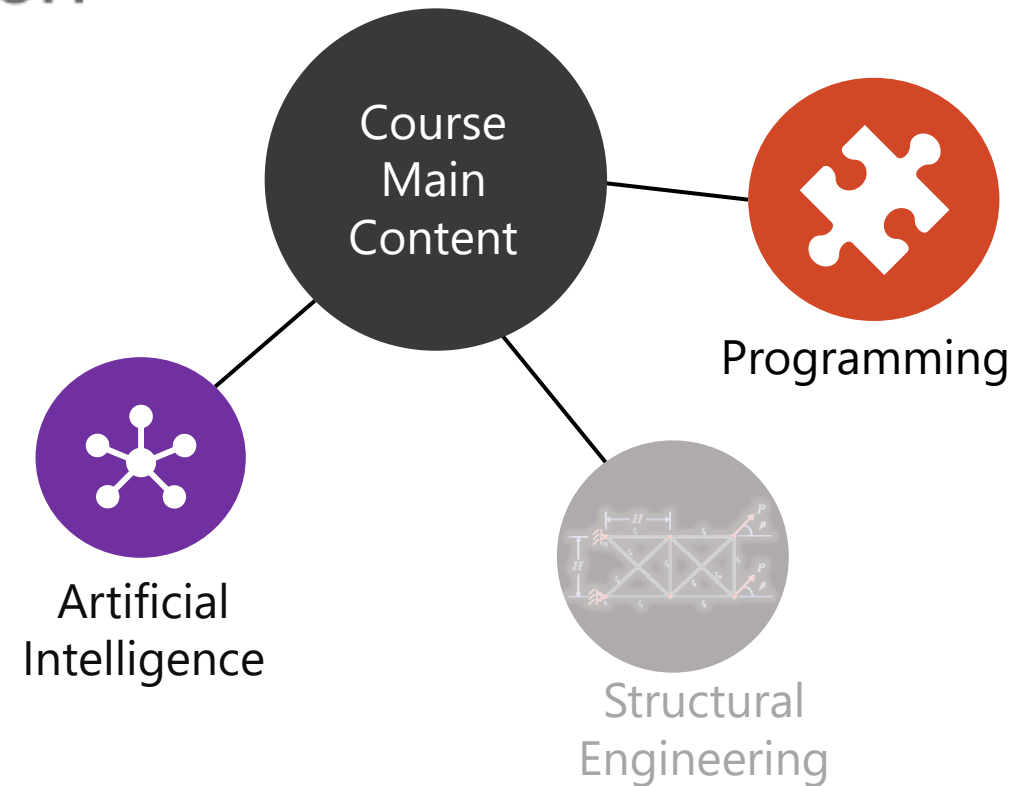
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# Week 1 – Day 1 and Day 2

Programming with Python:

## 1. **Data Science** Modules



Python has several **built-in data types** to represent different kinds of values.

- **Numeric** Types: There are three numeric types in Python: **integer**, **float**, and **complex**.
- **Boolean** Type: True and False values.
- **String** Type: This type is used to represent text. A string is a sequence of characters enclosed in quotes.
- **List** Type: This type is used to represent a collection of items. **Square brackets**. [ ]
- **Tuple** Type: This type is like a list, but it is immutable (i.e., contents cannot be changed once created). **Parentheses**. ( )
- **Set** Type: This type is used to represent a collection of unique items. **Curly braces**. { }
- **Dictionary** Type: A dictionary is an unordered collection of key-value pairs enclosed in **curly braces**, where each key is associated with a value.

These data types can be combined and used in various ways to represent and manipulate data in Python.

# Try it out – Exercise!

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OPEN THE NOTEBOOK:

**04-DataSciencePython.ipynb**

# Try it out – Assignment!

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1. Complete the Notebook Exercises.
2. Test these Exercises in Spyder.