Assignment 2 Numpy
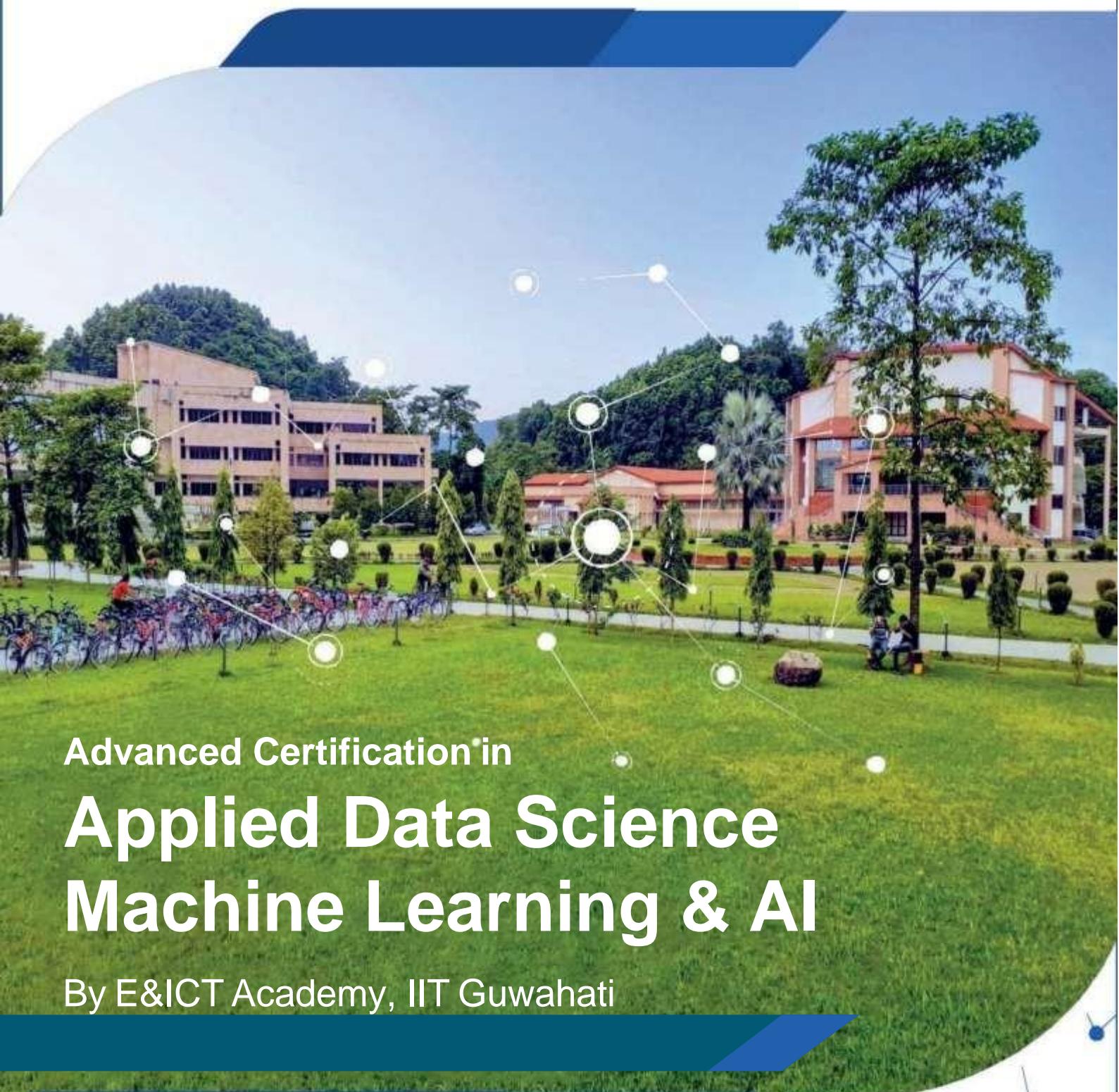
Advanced Certification in

Applied Data Science Machine Learning & AI

By E&ICT Academy, IIT Guwahati

Assignment 2 Numpy

Q1. Create the first numpy array of 1-D with values (1,2,3,0). Create a second numpy array of 1-D with values (4,1,0, 6). Perform following simple arithmetic operations on these two numpy arrays:

- Addition
- Subtraction
- Multiplication
- Division

Q2. Create the first numpy array of random integers between 1-100 of 5 elements in 1-D. Create second numpy array of 2-D for the same range of integers of shape 4*5. Now perform following simple arithmetic operations on these two numpy arrays:

- Addition
- Subtraction

Q3. Create a 3-D array of 27 random elements using random function of shape 3*3*3. Now pull the following elements using indexing/slicing

- Third column of second 2-D array
- First and third row of first 2-D array
- Intersection of first row and third column in third 2-D aray

Assignment 2 Numpy

Q4. Create a 2-D numpy array of random integers between 1 to 100 with shape 5*4. Now perform following operations:

- Print only the even numbers from this array
- Print only the odd numbers from this array
- Print row wise sum of all elements
- Print column wise sum of all elements
- Convert this 2-D array into 3-D array of shape 2*2*5

Q5. Create a 2-D numpy array of random integers between 1 to 100 with shape 5*4. Now perform following operations:

- Swap first row with third row
- Swap second column with fourth column.
- Replace the values less than 50 with zero.
- Convert this 2D array into 1-D array

Q6. Explain the concept of stacking in numpy with examples. How is it different from concatenation. Give any 3 differences between them.

Program Information:

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