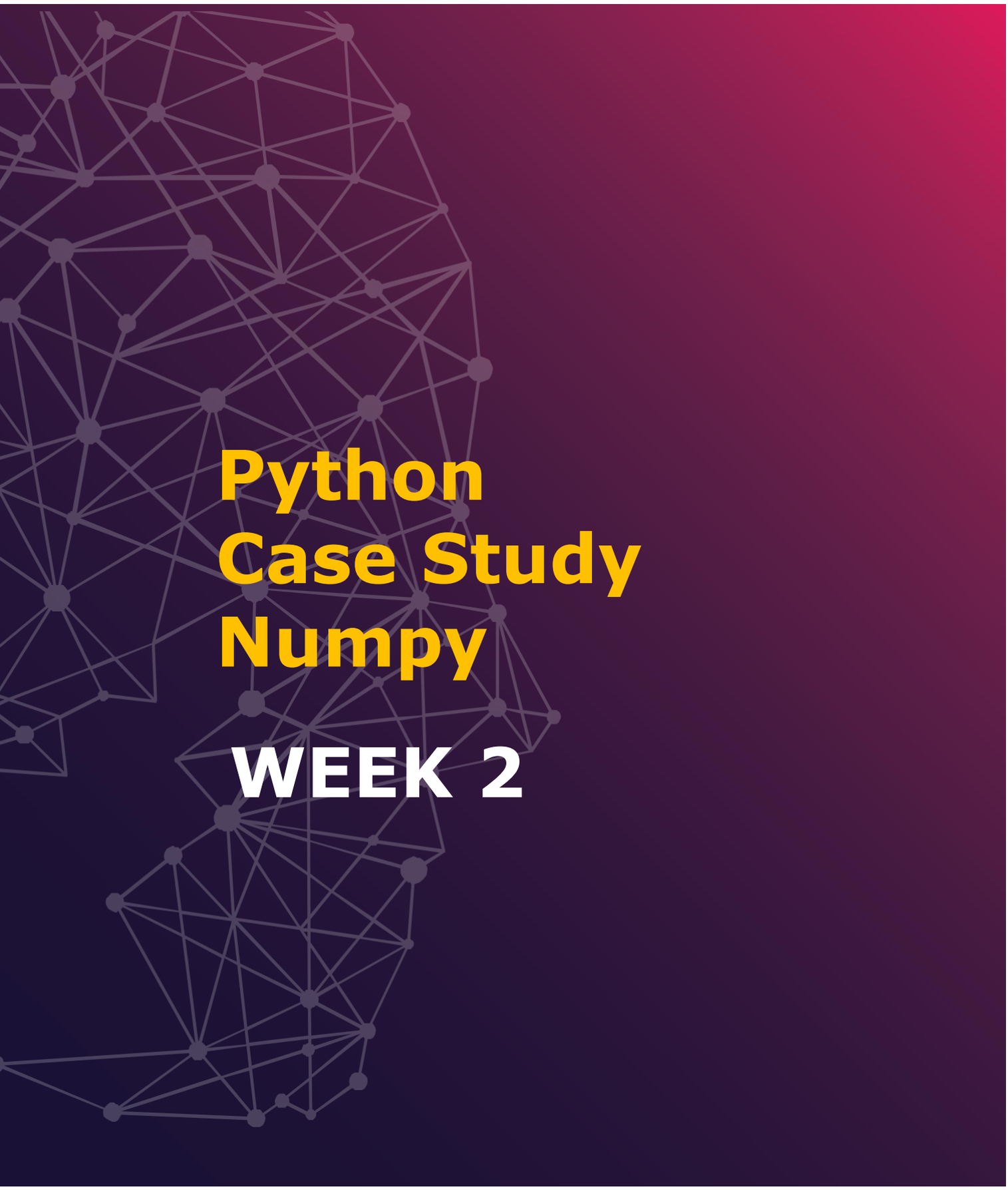

Python Case Study Numpy

WEEK 2

Data Science Academy

CASE STUDY

You are asked to write a Python program according to the following questions.

1) Create an array of 20 linearly spaced points between 0 and 1.

2) Create a 5x5 matrix from 1 to 25 and sum the columns' numbers.

3) Create the following matrix.

0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09	0.1
0.11	0.12	0.13	0.14	0.15	0.16	0.17	0.18	0.19	0.2
0.21	0.22	0.23	0.24	0.25	0.26	0.27	0.28	0.29	0.3
0.31	0.32	0.33	0.34	0.35	0.36	0.37	0.38	0.39	0.4
0.41	0.42	0.43	0.44	0.45	0.46	0.47	0.48	0.49	0.5
0.51	0.52	0.53	0.54	0.55	0.56	0.57	0.58	0.59	0.6
0.61	0.62	0.63	0.64	0.65	0.66	0.67	0.68	0.69	0.7
0.71	0.72	0.73	0.74	0.75	0.76	0.77	0.78	0.79	0.8
0.81	0.82	0.83	0.84	0.85	0.86	0.87	0.88	0.89	0.9
0.91	0.92	0.93	0.94	0.95	0.96	0.97	0.98	0.99	1.

4) Follow the steps:
   A) Define a structured data type (name - S20, Surname - S20, age-i1, mark-f4)
   B) Create an array with the given information below in a data type created
   (Behram Abbasov 26 85, Yusif Abdullayev 22 92, Maryam Mecidova 19 88, Vagif Hesenzade 24 79)

5) Create the following array.

99	99	99	99	99	99	99	99	99	99
99	1	0	0	0	0	0	0	0	99
99	0	1	1	1	1	1	1	0	99
99	0	1	0	0	0	0	1	0	99
99	0	1	0	1	1	0	1	0	99
99	0	1	0	1	1	0	1	0	99
99	0	1	0	0	0	0	1	0	99
99	0	1	1	1	1	1	1	0	99
99	0	0	0	0	0	0	0	1	99
99	99	99	99	99	99	99	99	99	99