UNITED INTERNATIONAL UNIVERSITY

Department of Computer Science and Engineering (CSE)

Evaluation 3

SN	Questions	Marks
1	$$\begin{bmatrix} n & \sum x_{1i} & \sum x_{2i} & \sum x_{3i} \\ \sum x_{1i} & \sum x_{1i}^2 & \sum x_{1i}x_{2i} & \sum x_{1i}x_{3i} \\ \sum x_{2i} & \sum x_{1i}x_{2i} & \sum x_{2i}^2 & \sum x_{2i}x_{3i} \\ \sum x_{3i} & \sum x_{1i}x_{3i} & \sum x_{2i}x_{3i} & \sum x_{3i}^2 \end{bmatrix} \begin{bmatrix} a_0 \\ a_1 \\ a_2 \\ a_3 \end{bmatrix} = \begin{bmatrix} \sum y_i \\ \sum x_{1i}y_i \\ \sum x_{2i}y_i \\ \sum x_{3i}y_i \end{bmatrix}$$ Using the above equation for regression, determine the values of a_0, a_1, a_2 and a . It will be based on the following dataset.	10
2	$$z = x^2 \cdot \sin(y)$$ $$a = z^3 + e^z$$ $$p = \ln(a) + a^2$$ Consider the following equations. Using the tensorflow gradient tape, determine gradients of p with respect to x and y evaluated at x=2 and y=10.	10
3	**Quiz** : Will be based on the **code** you submitted and the **class lecture**. Complete the assignment with **THOROUGH UNDERSTANDING** of the code and functions you are using.	10