



EAST WEST UNIVERSITY
Department of Computer Science and Engineering
B.Sc. in Computer Science and Engineering Program
Final Assessment, Spring 2020 Semester

Course: CSE365 Artificial Intelligence, Section-3 & 4
Instructor: Jesan Ahammed Ovi, Lecturer, CSE Department
Full Marks: 20 (20 will be counted for final grading)
Time: 1 Hour

Note: There are TWO questions, answer ALL of them. Course Outcome (CO) and Mark of each question are mentioned at the right margin.

1. Consider the following dataset. Here attribute X_1 represent the length (cm) of fish and attribute Y indicates the price (\$). Suppose relation between X_1 and Y is linear. Now estimate the value of variable W_0 and W_1 after 1st iteration. Let initial value of those variables are 0.5 and 1.5 respectively. While learning rate $\alpha = 0.0001$. [CO3, Marks: 10]

X_1	Y
100	5
120	6.65
200	15
70	4.95

2. Suppose there are 3 features X_1 , X_2 and X_3 that estimate the continuous variable Y . if the relation between them is linear then write the equation that represent their relationship. Let the error between predicted Y^* and actual Y is e , write the equation of error e . also calculate the mathematical equation for the unknown variables W_0 , $W_1 \dots W_n$ (as many W as you need for above situation) [CO3, Marks: 10]