Basics of Data Analytics – Fundamentals

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Assignment 6

Human Resources department of an IT company compiled the salary, years of education, years of experience and average number of hours worked each week for 8 of their employees. And the data is as follows:

- Y represents an employee's annual salary, measured in thousands of dollars.
- X_1 represents years of experience.
- X_2 represents average number of hours worked each week.
- X_3 represents and employee's years of education. A value of 0 represents someone who only has pre-university certificate, 4 indicates graduate education and 6 indicates post-graduate education.

Annual Salary $ Thousands - Y	Years of experience – X_1	Hours worked per week – X_2	Years of education – X_3
82	4	40	4
48	2	40	0
60	1	50	4
85	1	50	6
72	4	50	0
62	3	40	0
90	3	50	4
101	4	60	6

Fit a regression equation for this data and find the following.

1) What is the starting salary for a new employee with no experience and has pre-university certificate?
2) What is the salary incremented for every year of education after pre-university certificate?
3) What is the salary incremented for an additional year of experience?
4) What is the salary addition for an additional hour of work per week?
5) What should be the proposed salary of a potential new hire with 6 years of education with 6 years of experience and is expected to work 40 hours per week?