

Polynomial Regression:

Before we go into details of polynomial regression, let us consider our case study first.

Problem Statement:

Consider our company wants to recruit certain people for certain positions. They have found a potential employee who is currently working as a vice president for last 2 years. He is expecting a salary of 190000 for his 2 years experience as vice president.

Now the question is, does his demand fit into our company's salary structure? If his demand fits, how much can we really offer him?

Our company's salary and position data:

The company has approximate salaries according to positions as below.

Position	Level	Salary
Software Engineer	1	22000
Sr. Software Engineer	2	24000
Technology Lead	3	30000
Team Leader	4	38000
Manager	5	50000
Senior Manager	6	75000
Associate Vice President	7	110000
Vice President	8	170000
President	9	260000
CEO	10	480000

Usually in our company, an employee can rise from Vice President to President level in 6 years, so we will predict salary for 8.3 level, because the employee has worked one third of tenure to become President.