

Q: Calculate the **moving average of salaries over the last 3 employees ordered by hire date.**

Select

Name,

Hire_date,

Salary,

AVG(salary) over(order by hire_date ROWS BETWEEN UNBOUNDED 2/3 PRECEDING AND CURRENT ROW) as moving_avg_salary

From employees;

hire_date	employee	salary
2020-01-01	Alice	5000
2020-02-01	Bob	6000
2020-03-01	Carol	7000
2020-04-01	Dave	8000

employee	salaries included (based on window)	moving avg
Alice	(Alice)	5000
Bob	(Alice, Bob)	$(5000 + 6000)/2 = 5500$
Carol	(Alice, Bob, Carol)	$(5000 + 6000 + 7000)/3 = 6000$
Dave	(Bob, Carol, Dave)	$(6000 + 7000 + 8000)/3 = 7000$

hire_date	employee	salary	3-emp moving avg
Jan	Alice	50k	50k
Feb	Bob	52k	51k
Mar	Carol	60k	54k
Apr	Dave	70k	60.7k
May	Eve	90k	73.3k

Use-case/Common insights we can draw:

1. **Salary-trend analysis:** Are newer employees being paid more or less than the recent average?
2. **Compensation consistency:** Is the pay range stable, or are there spikes (indicating uneven pay decisions)?

3. **Hiring strategy shift:** If the moving average dips, maybe the company started hiring more junior (lower-paid) employees?