

Large dataset of monthly salaries across different departments in a company. Your task is to calculate the 90th percentile salary for each department, and then use that information to determine which department has the highest "top-tier" salary.

Here's where the puzzle might come in:

1. **Which departments should you focus on?** Do you consider departments with a higher number of employees? Do you filter out departments with outliers?
2. **How do you handle departments with small sample sizes?** If some departments have very few employees, should you still compute the 90th percentile?
3. **How do you deal with missing data?** Missing salary data could affect the percentile calculation, so you must decide whether to exclude those values or impute them.

### **Conclusion:**

Percentile-based moments in data science might refer to statistical challenges or complex calculations involving percentiles (or moments) of distributions. These puzzles arise when interpreting percentiles for different datasets, distributions, or when managing edge cases