

# Insights Summary

## 1. Data Exploration:

- The data consists of 13 columns and 148654 rows, each representing an employee.
- The columns have different data types: object, int64, and float64.
- Some columns have missing values, which are dealt with by removing rows with no 'EmployeeName' and replacing other missing values with the mean or median.

## 2. Descriptive Statistics:

- The salaries have a mean of \$66325.44, a median of \$63528.83, and a standard deviation of \$40625.34.
- The salaries range from \$0.00 to \$319275.01.

## 3. Data Visualization:

- The salaries have a right-skewed distribution, with a few very high values.
- The most frequent department is "Public Works", followed by "Police Department" and "Fire Department".
- The departments have different proportions of employees.

## 4. Grouped Analysis:

- The salaries change depending on the year and the agency.
- The salaries tend to increase over time.
- The salaries vary greatly among different agencies, with some agencies offering higher pay than others.

## 5. Simple Correlation Analysis:

- The salaries have a positive correlation with overtime pay, meaning that more overtime leads to higher pay.

The analysis reveals the salary patterns, the distribution of employees by department, the salary trends by year and agency, and the association between salary and overtime pay. These insights can be useful for various applications such as salary comparison, workforce management, and pay evaluation.