Data Science Salaries in 2023

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CS 673 Scalable Databases
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The Problem

Overview

The data science sector is interdisciplinary, and has roles for every background. What kinds of roles exist? What salaries do they pay? What characteristics do such jobs have?

Context

As budding data scientists, we are preparing to enter the job market after graduating at Pace University. It would help immensely if we know what the landscape of data science jobs looks like.

Problem Statement

We will examine a dataset of data science job roles and their associated characteristics, along with their corresponding salaries. We will report our findings.

The Datasets

Obtained from Kaggle

1. Data Science Salaries 2023
2. Data Science and STEM Salaries

Analysis Pipeline

Data Import & Cleaning

- Imported data as DataFrame
- Examined raw data
- Dropped null, missing, duplicate, and unwanted data values & columns
- Label encoding of data

Exploratory Data Analysis

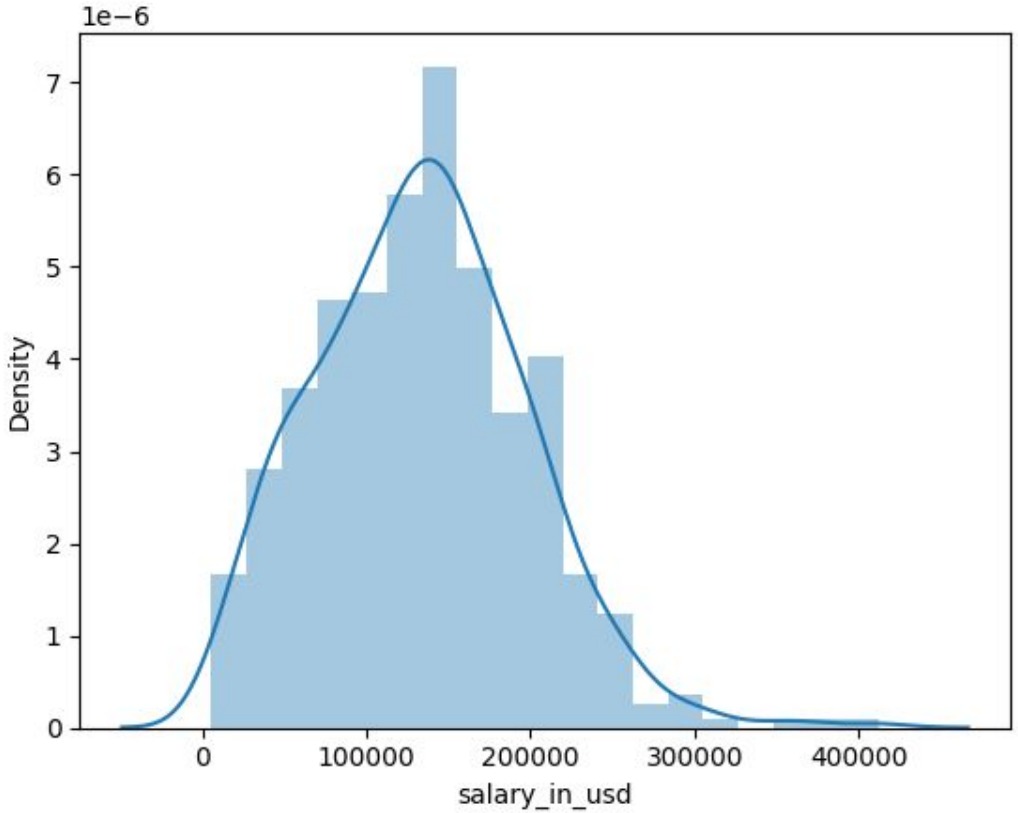
- Histogram distribution
- Pair plot
- Heatmap
- Scatter plot

Targeted Queries

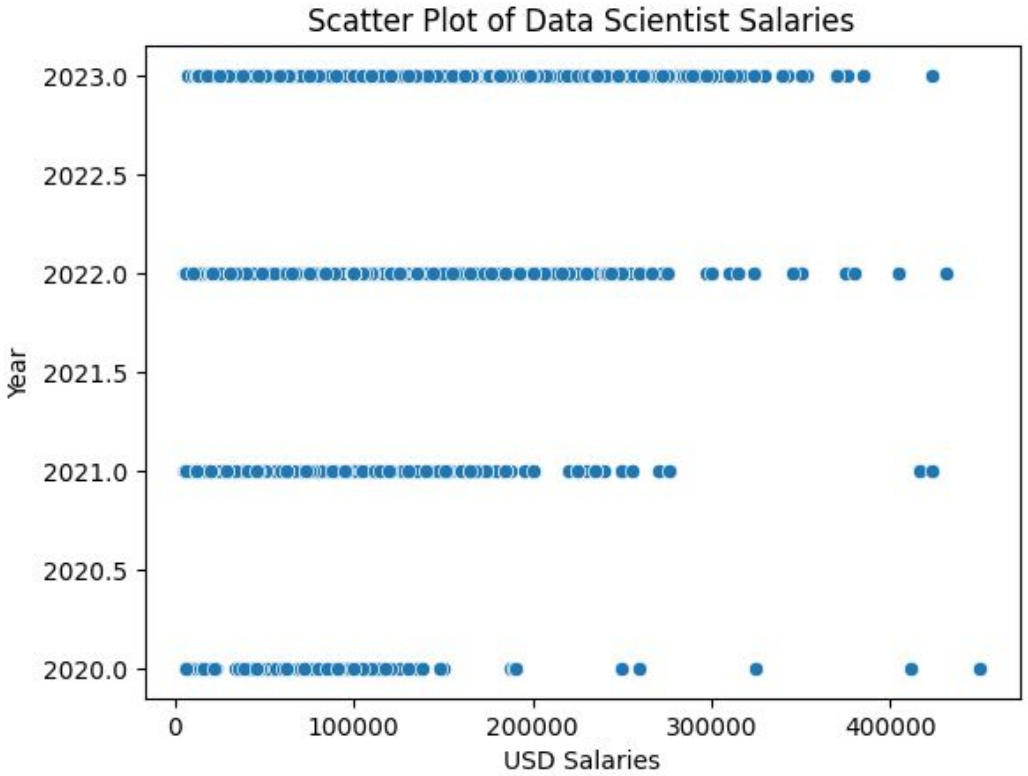
- Subsetting data
- Slicing data
- Aggregating data
- Statistics from data
- Functions

Key Results

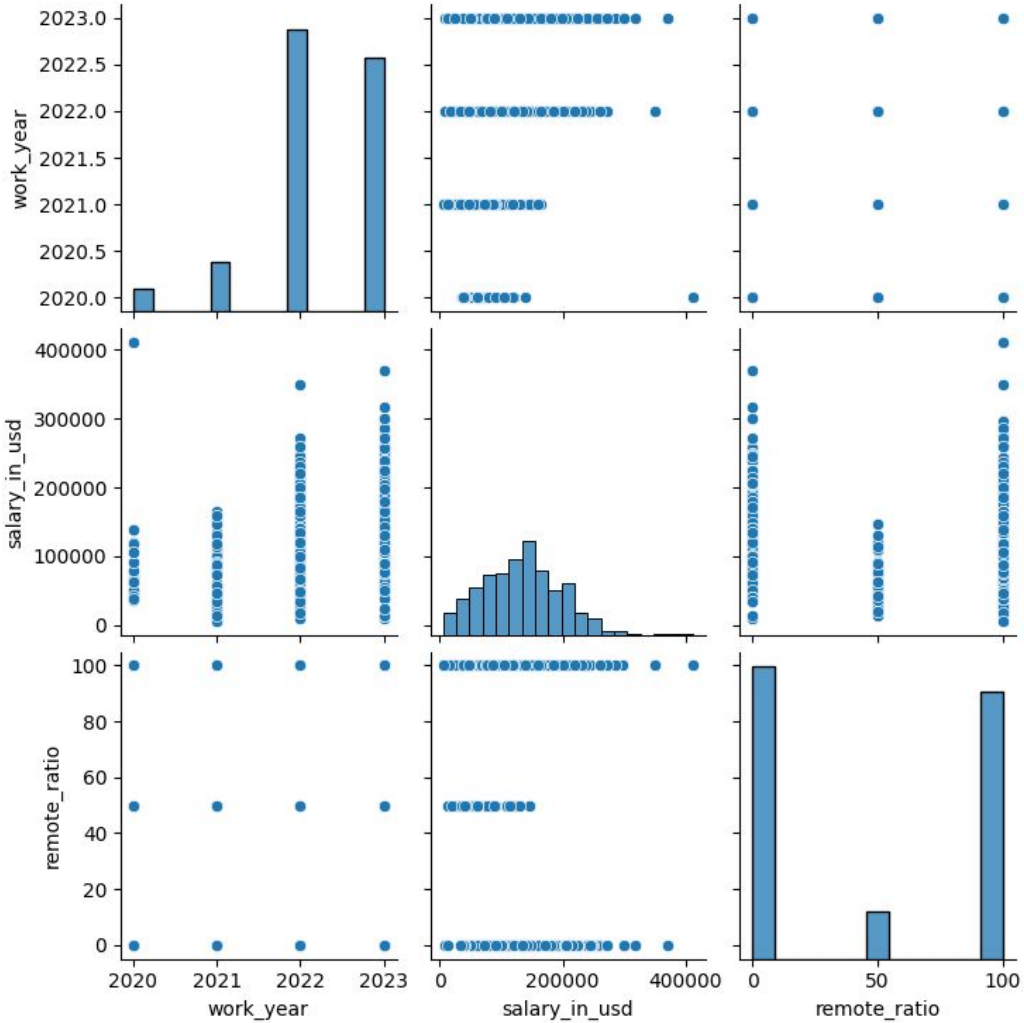
Distribution Density



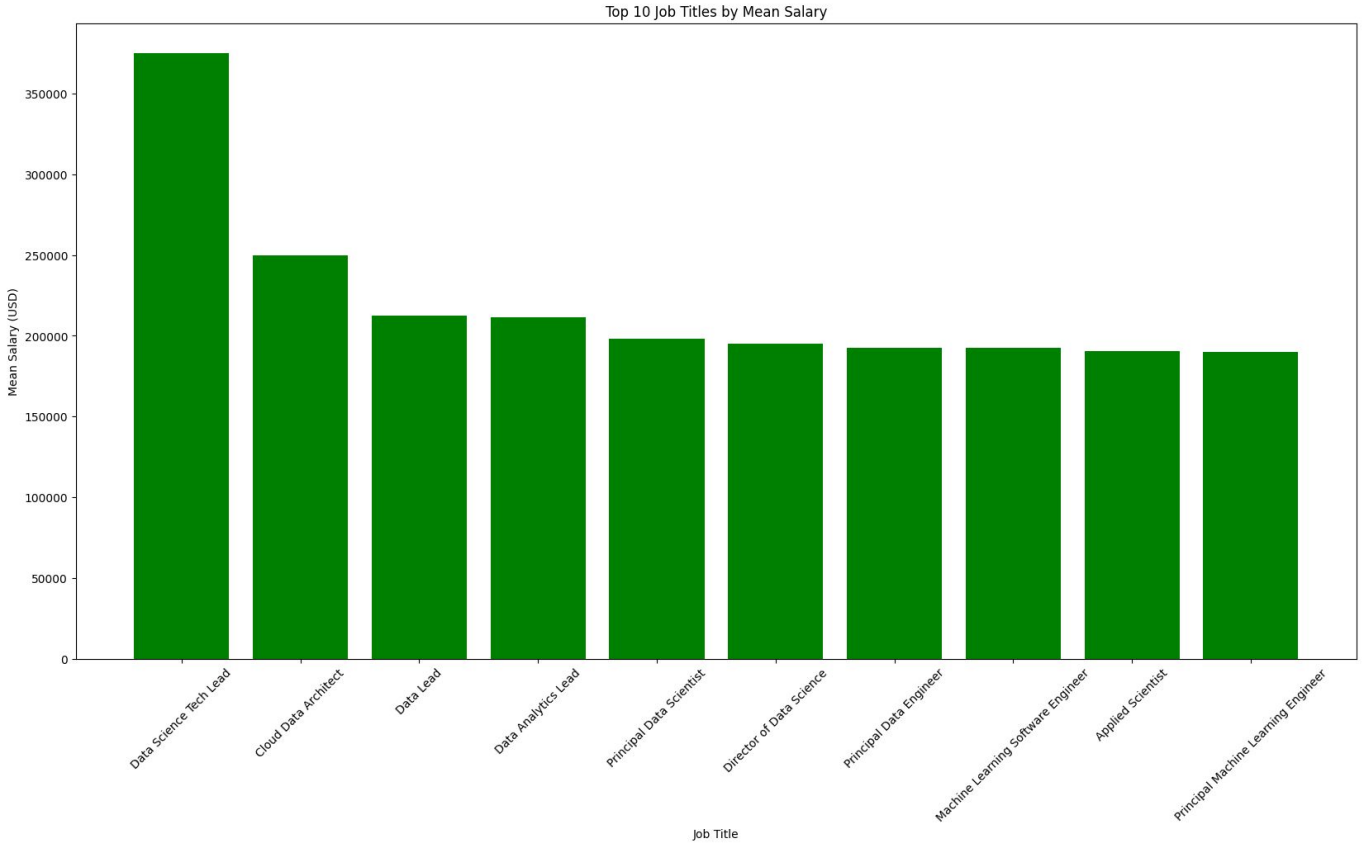
Scatter Plot



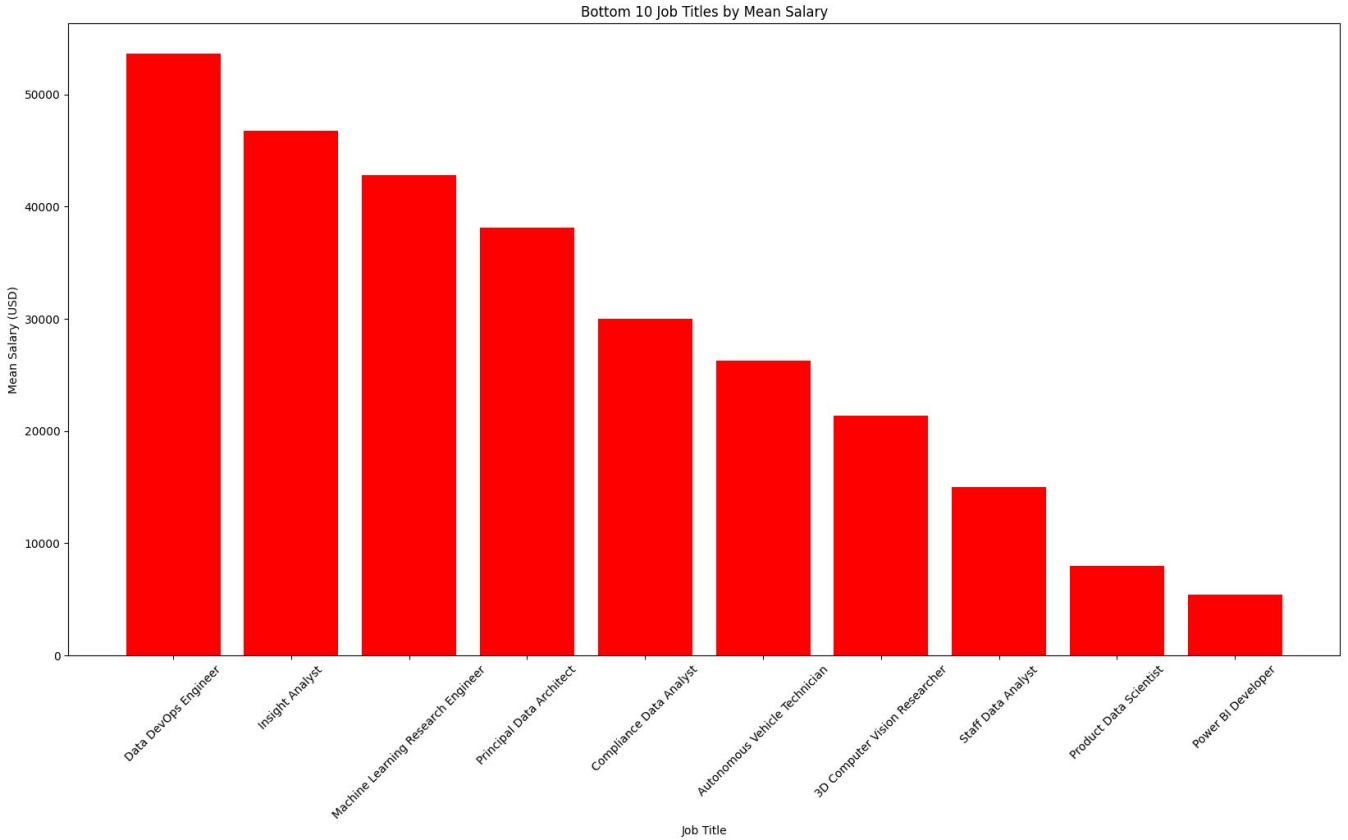
Pair Plot


work_year
salary_in_usd
remote_ratio
2020
2021
2022
2023
0
200000
400000
0
50
100

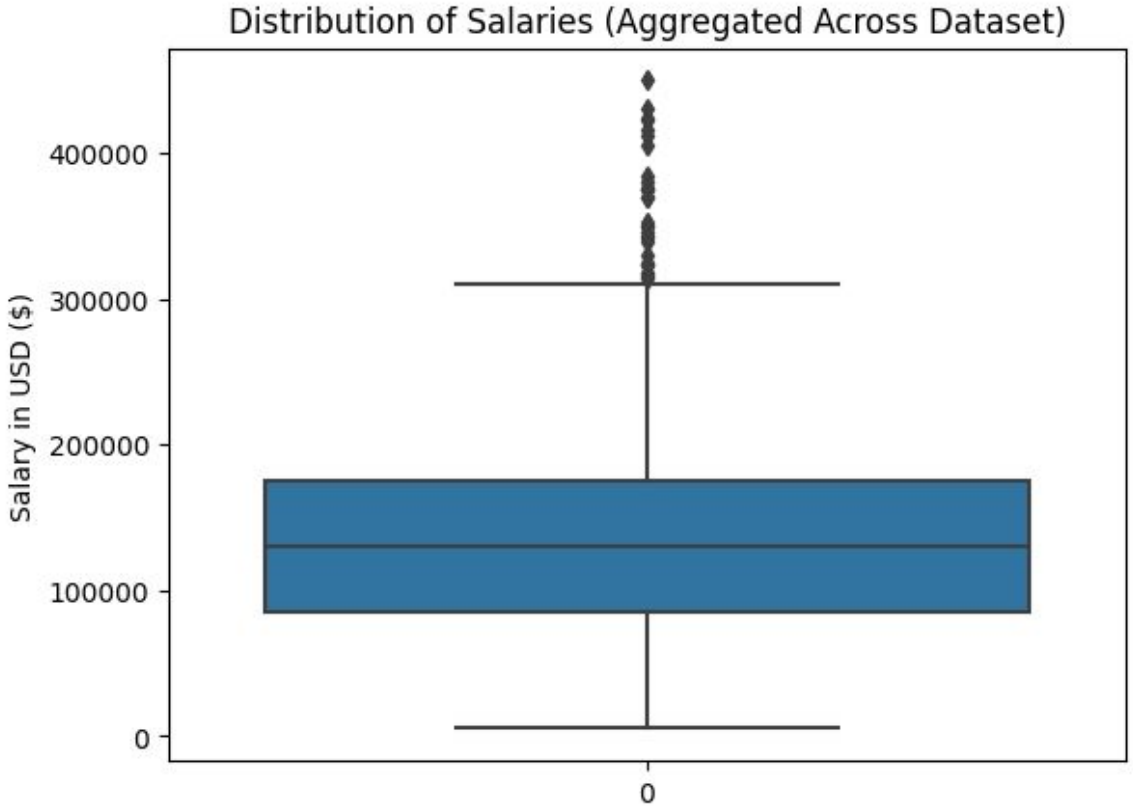
Top 10 Jobs by Salary



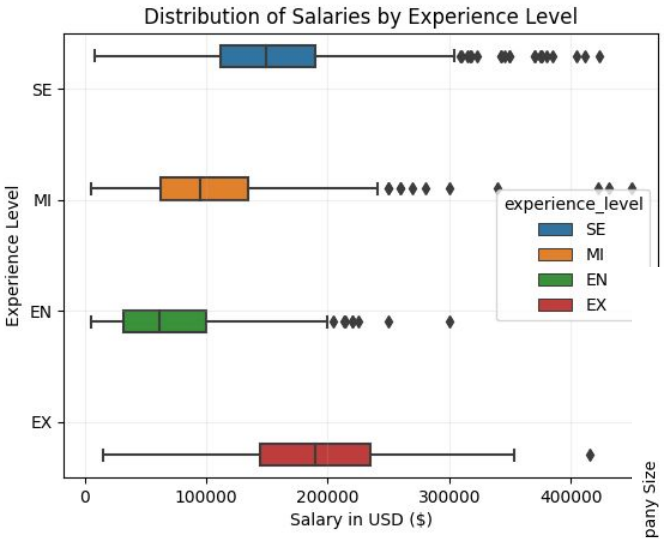
Bottom 10 Jobs by Salary

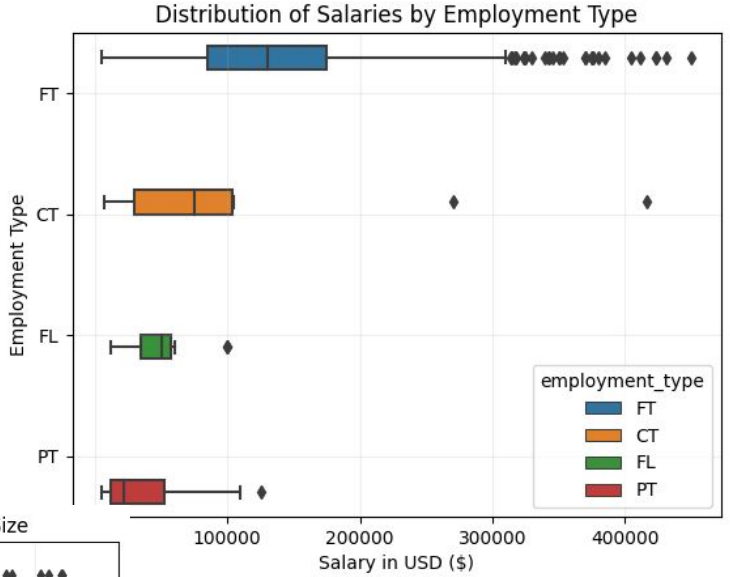


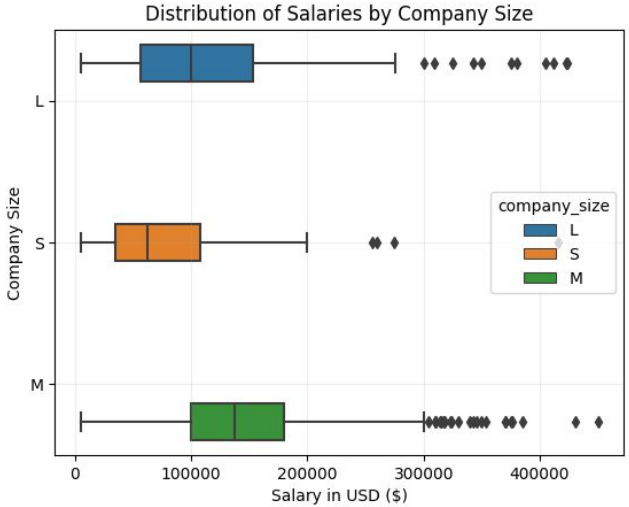
Distribution of Salaries



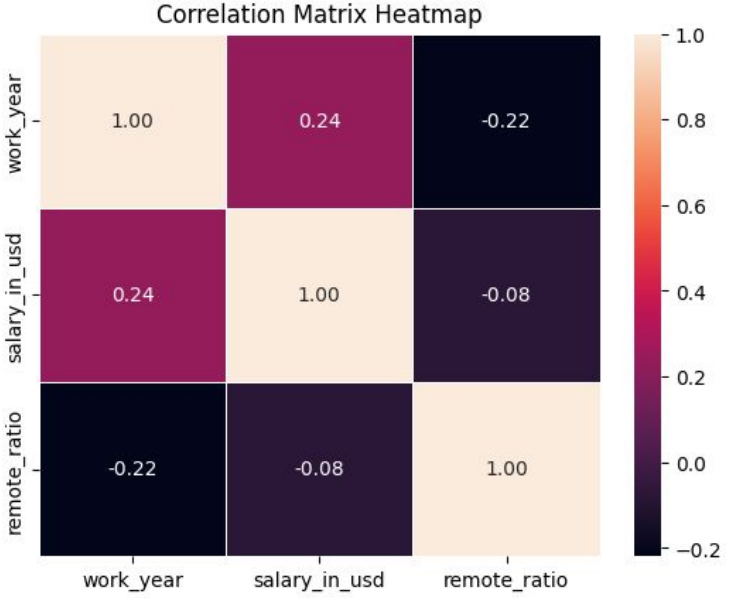
More Distributions

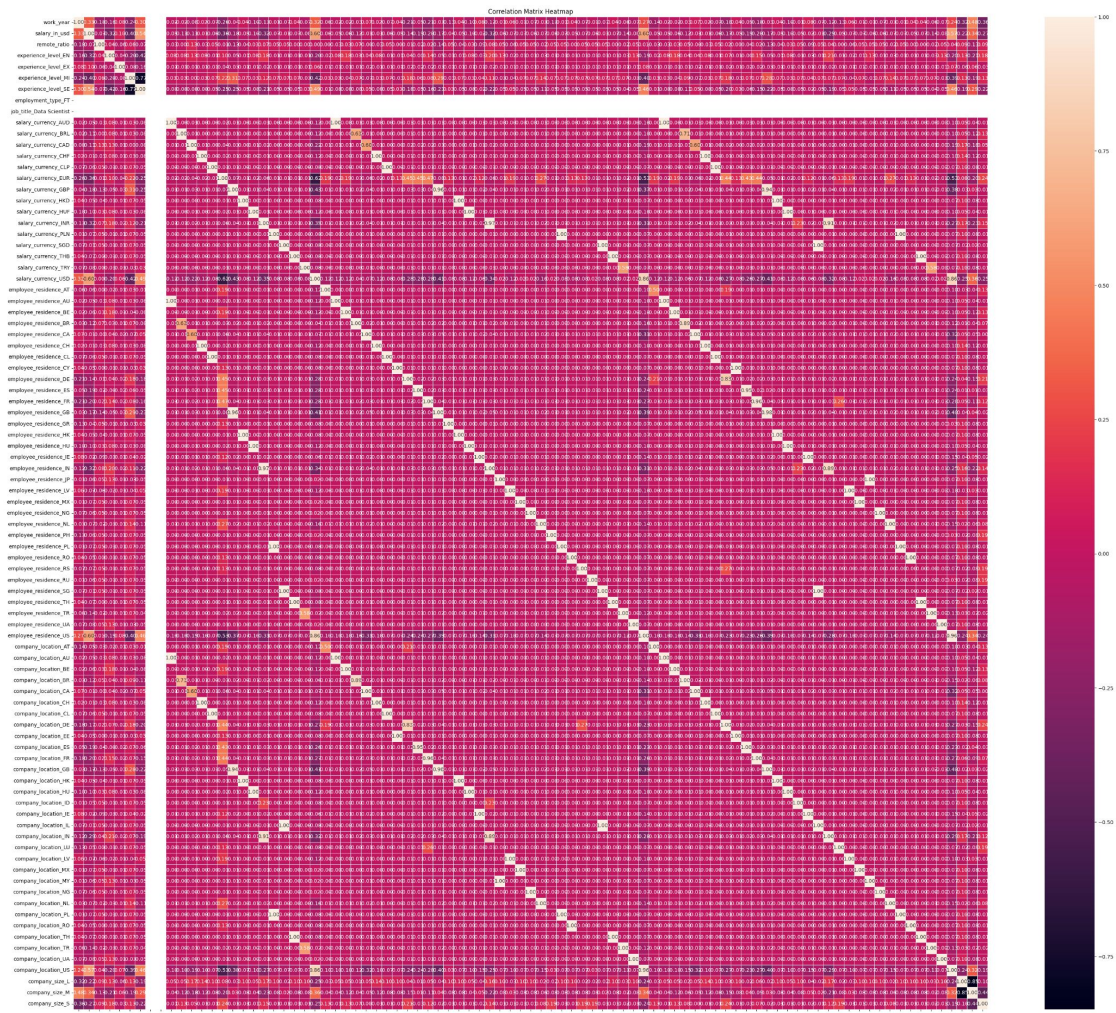






Correlation Matrix





Mean Salaries by Category

employment_type
FT 134434.613271
CT 113446.900000
FL 51807.800000
PT 39533.705882

employee_residence
IL 423834.000000
MY 200000.000000
PR 166000.000000
US 153972.206550
CA 130859.839506

company_location
IL 271446.500000
PR 167500.000000
US 152374.791602
RU 140333.333333
CA 130572.759036

remote_ratio
0 143690.173693
100 131821.666391
50 78486.609626

company_size
M 141474.514300
L 113202.239609
S 78364.278912