Title : **Analysis of the Job Market Data with LLMs in Google Sheets and Julius Reporting AI Agent**

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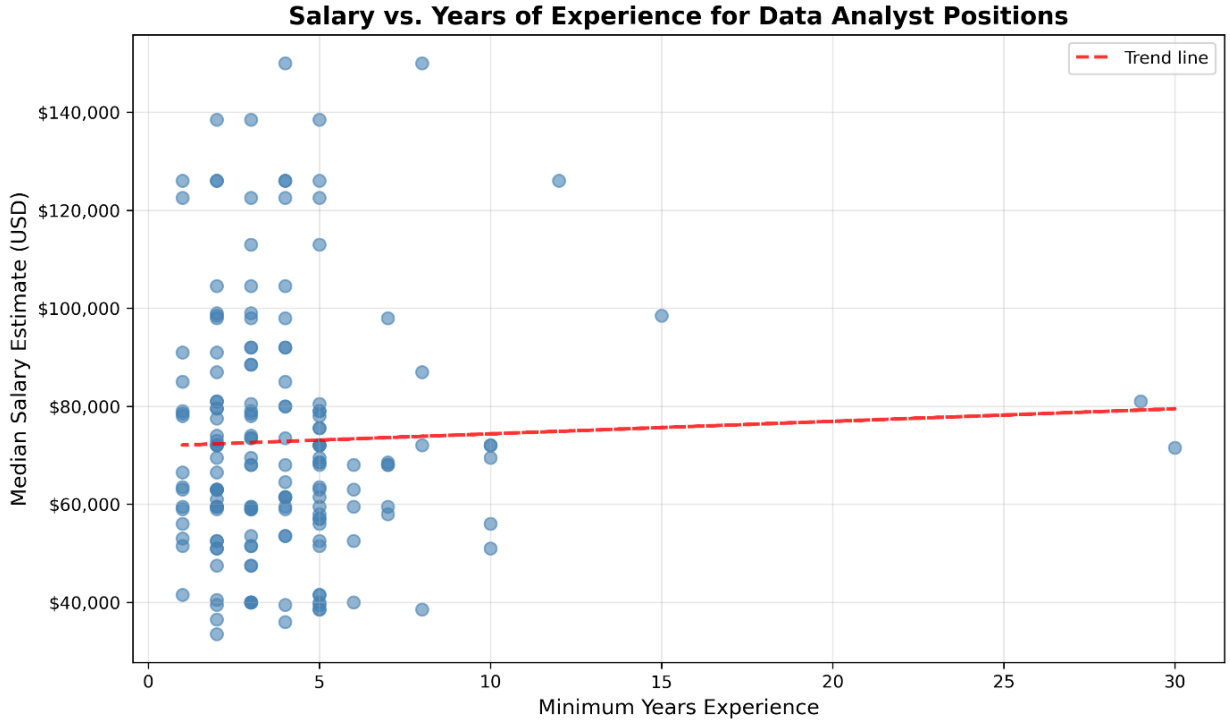
Introduction

This report explores a sample of job-market postings using LLM assisted workflows in Google Sheets (including the MYGPT function) and the Julius Reporting AI Agent. Analyses focus on the relationship between required experience and salary, and salary patterns by programming-language requirements. Because several variables contain missing values (e.g., 172 non-missing points for the experience salary analysis after excluding 228 NAs) and subgroup sizes vary, with some groups relatively small, the estimates should be interpreted as indicative rather than definitive. Small samples can inflate uncertainty and make group means and trend lines unstable; results may not generalize to the broader job market without further validation.

I. Years of Experience Analysis:

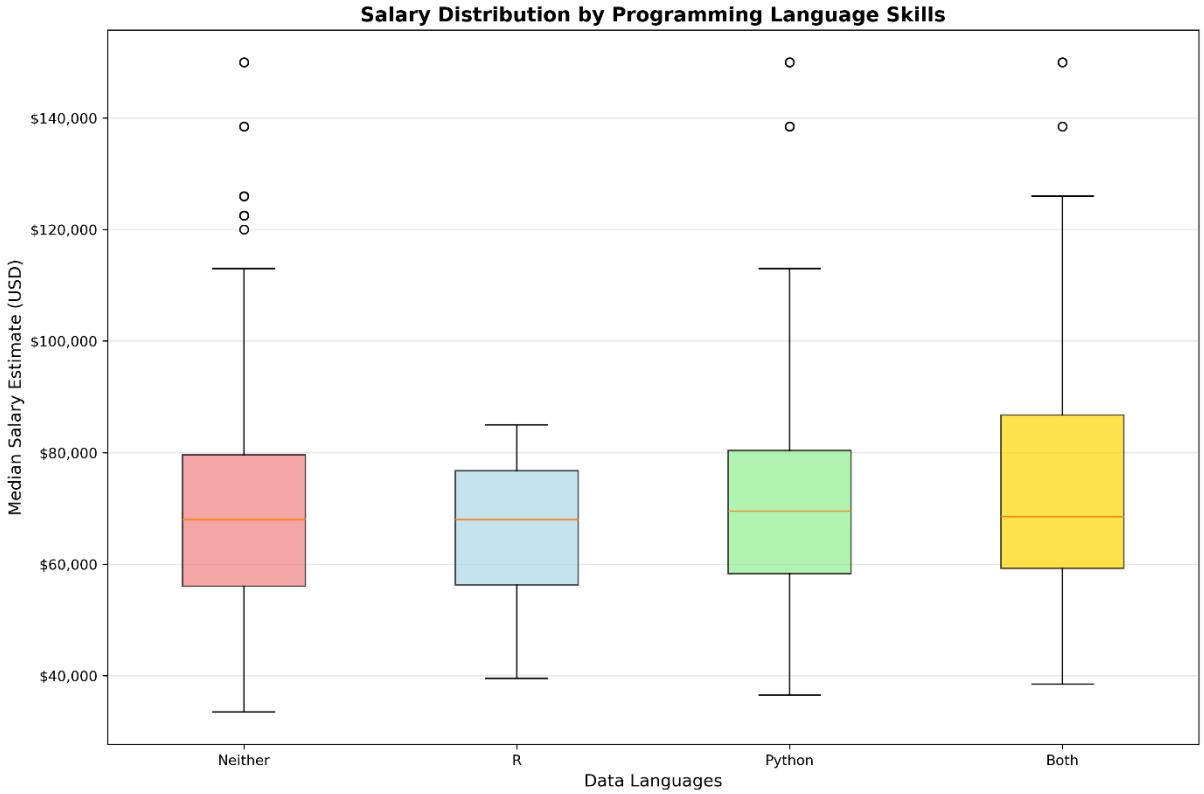
Scatter plot:



This scatter plot shows the relationship between minimum years of experience and median salary estimates. Scatter plot created with 172 data points (excluding 228 NA values) The trend line suggests a positive correlation between experience and salary, though there's considerable variation in the data.

II. Programming Language Analysis:

Box plot:



- Positions requiring both Python and R skills show the highest mean salary ($75,211)
- Python-only positions also command higher salaries ($75,241 mean)
- R-only positions show slightly lower salaries ($65,579 mean)
- Positions requiring neither language have the largest sample size (252 jobs) with moderate salaries ($70,506 mean)

III. Reflection:

- **What was easy:** Crafting a tight prompt for Julius (AI-assisted).
- **What I felt difficult:** Using the correct API key, typing the exact first target cell number (not just selecting it), and importing/renaming an existing dataset in Sheets.
- **What was surprising/noteworthy:** Nesting CONCATENATE inside MYGPT
- **What I learned:** New Google Sheets functions, how to use OpenRouter, and a clearer workflow/checklist for API-driven analysis in Sheets.