Data Jobs Salaries in Mexico in August 2022

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Image Source: https://www.istockphoto.com/es/foto/gr%C3%A1fico-de-cerca-financial-en-la-pantalla-del-ordenador-port%C3%A1til-gm1201802513-344790230

1. Introduction

- With the emergence of the big data, new jobs have appeared demanding new sets of skills and expertise for extracting value from data (Axis Talent, 2020):

- Business Analysts (BA)

- Data Analysts (DA)

- Data Architects (DR)

- Data Engineers (DE)

- Data Scientists (DS)

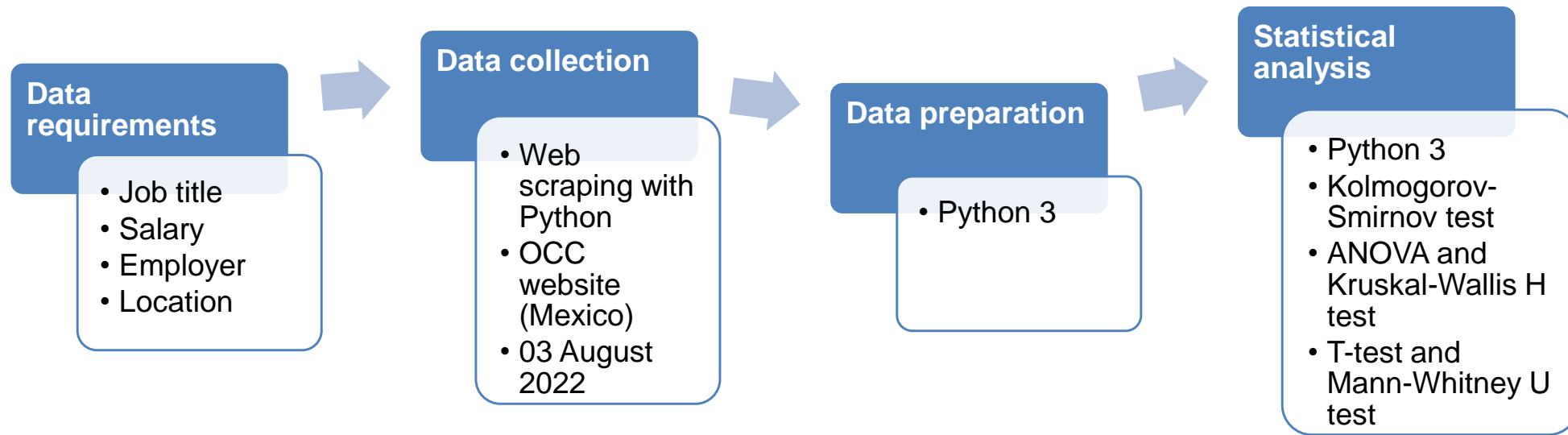- **Which one is the most valued in the Mexican labor market currently?**

Image Source: https://www.pexels.com/es-es/foto/foto-de-primer-plano-de-la-hoja-de-calculo-de-la-encuesta-590022/

2. Methodology

Research question:
Which data job category has the highest salary in the Mexican labor market in August 2022 according to the OCC website?

Data requirements
- Job title
- Salary
- Employer
- Location

Data collection
- Web scraping with Python
- OCC website (Mexico)
- 03 August 2022

Data preparation
- Python 3

Statistical analysis
- Python 3
- Kolmogorov-Smirnov test
- ANOVA and Kruskal-Wallis H test
- T-test and Mann-Whitney U test

Based on Rollins' Foundational Methodology for Data Science (2015).

3. Data Jobs Demand Analysis...

- **444 data jobs found.**

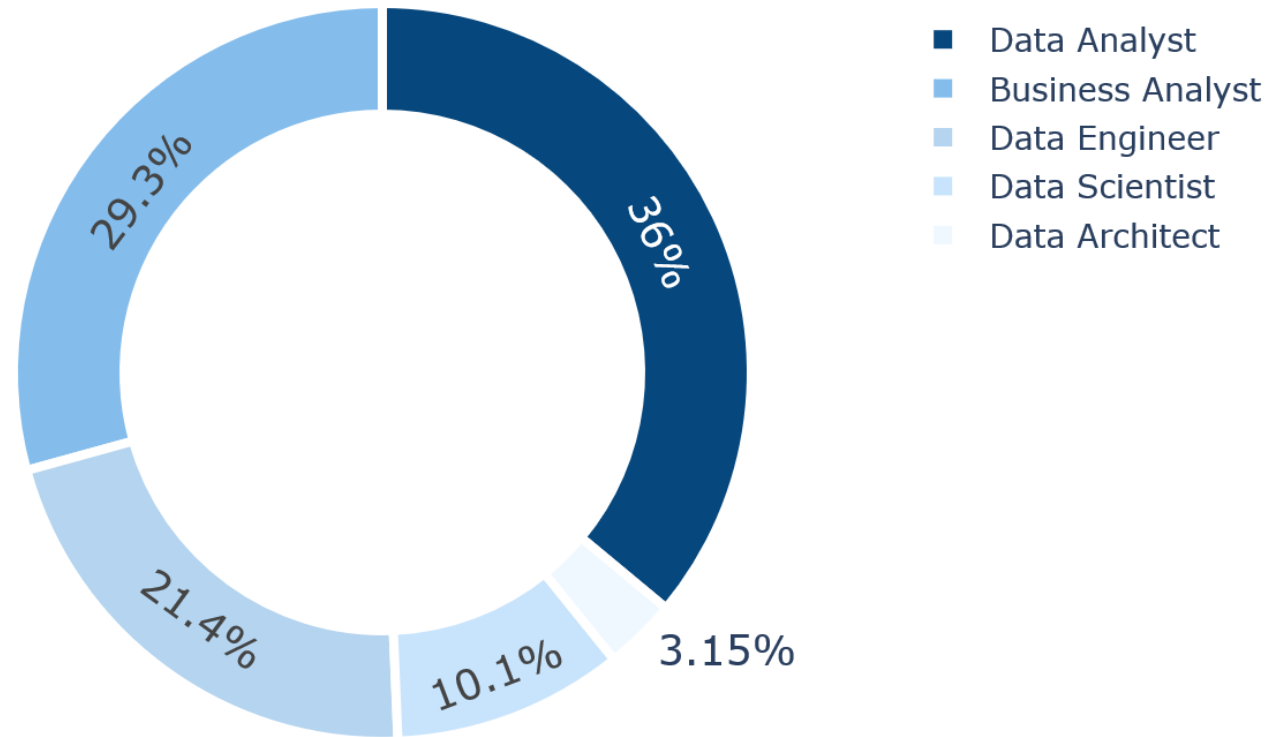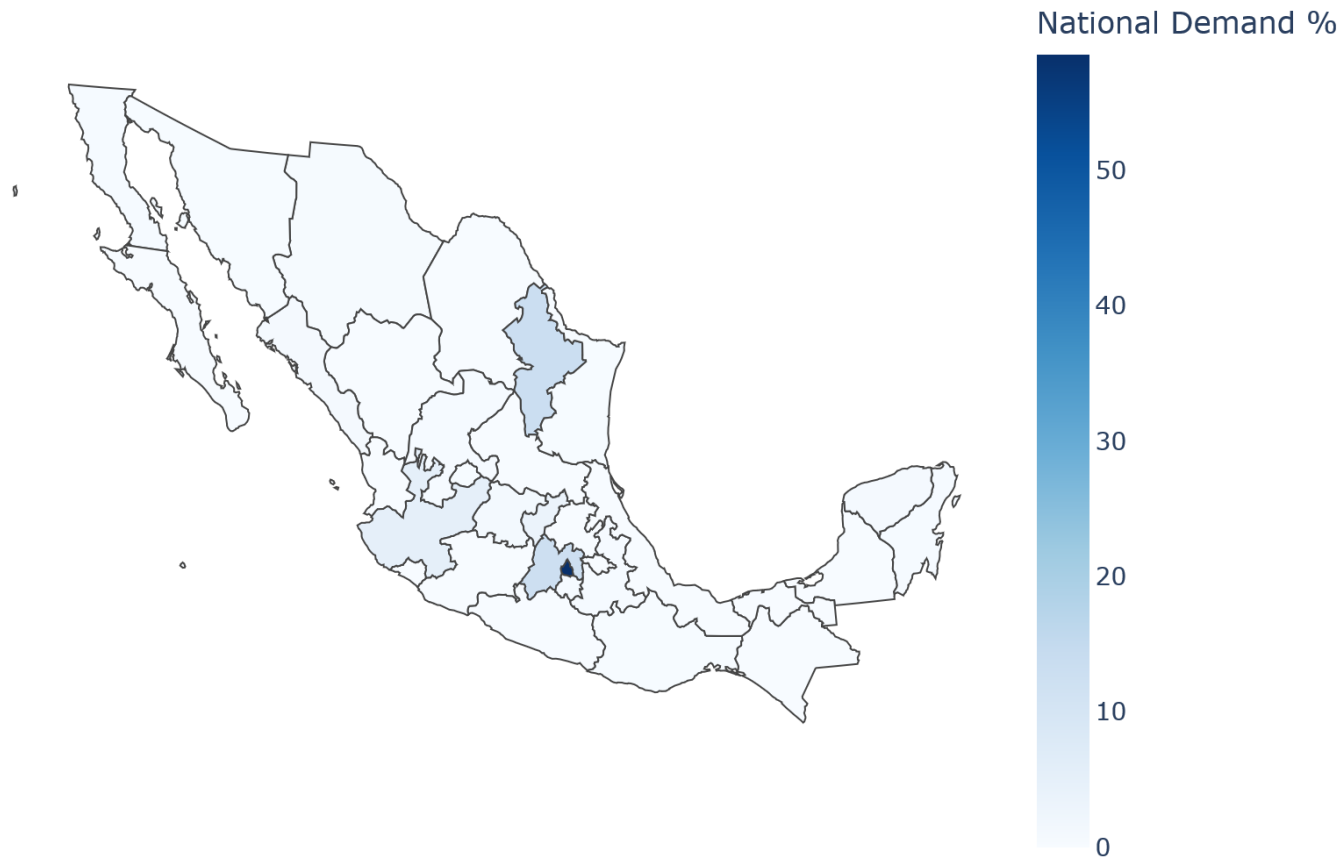- What is the most demanded data job? **Data Analyst.**

Legend:
- Data Analyst
- Business Analyst
- Data Engineer
- Data Scientist
- Data Architect

Chart values: 36%, 29.3%, 21.4%, 10.1%, 3.15%

Figure 1. Proportion of vacancies for each data job category in Mexico in August 2022 (own elaboration).
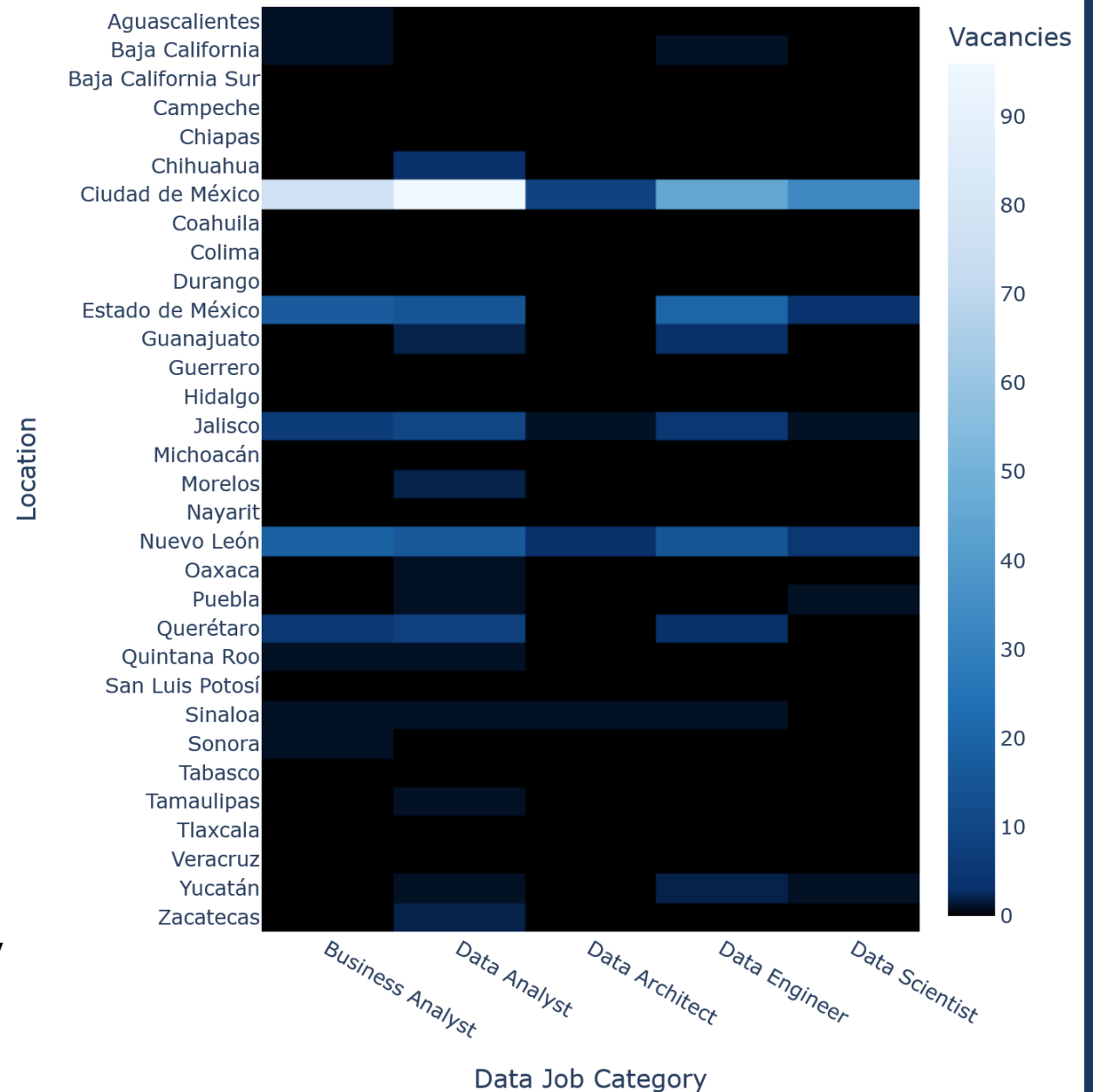
...Data Jobs Demand Analysis...

National Demand %

- Where do the most data jobs locate? **Ciudad de México.**

Figure 2. Data jobs demand per state in Mexico in August 2022 (own elaboration).

...Data Jobs Demand Analysis...

- What data job is the most demanded across the locations? **Data analysts.**

Figure 3. Data jobs demand per category and location in August 2022 (own elaboration).

…Data Jobs Demand Analysis…
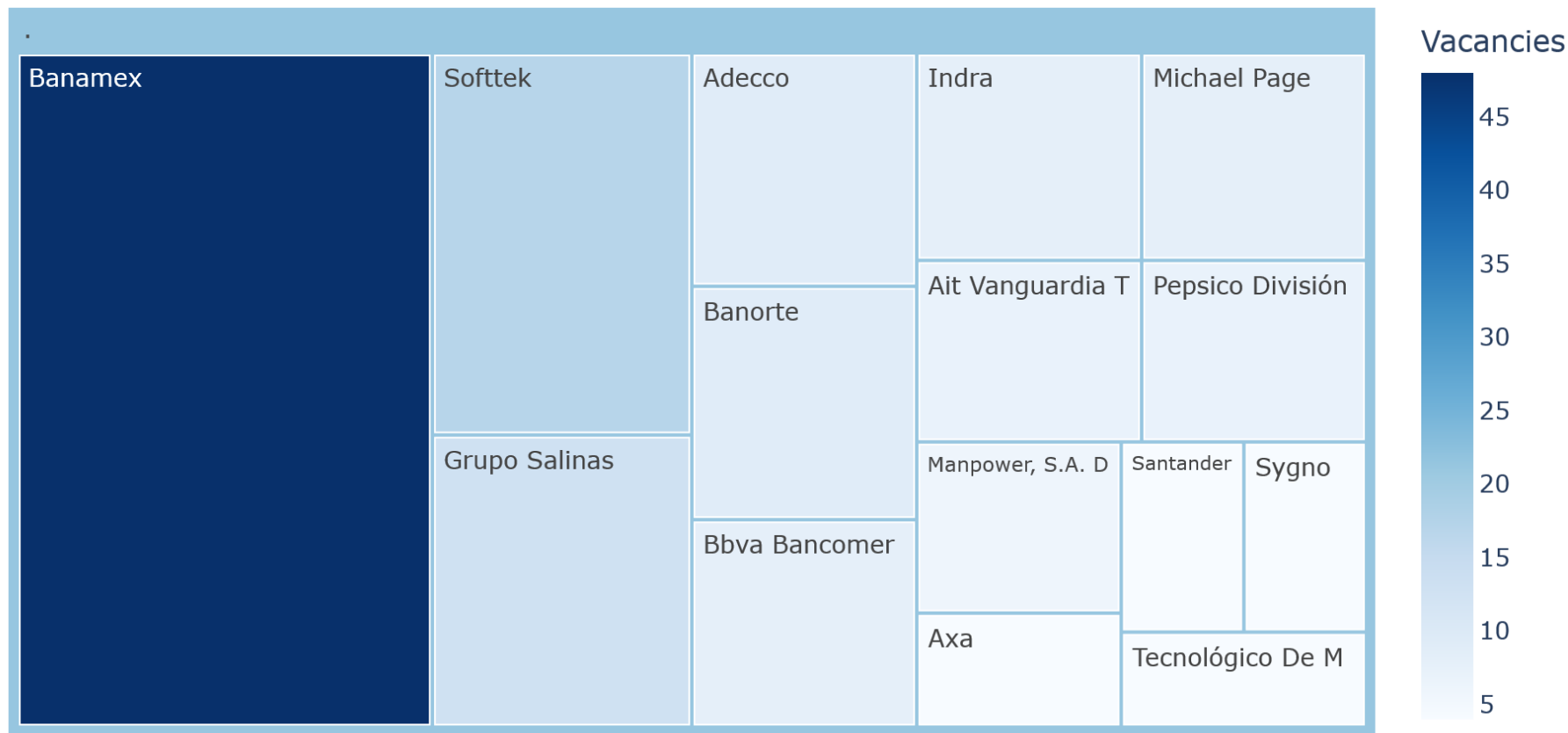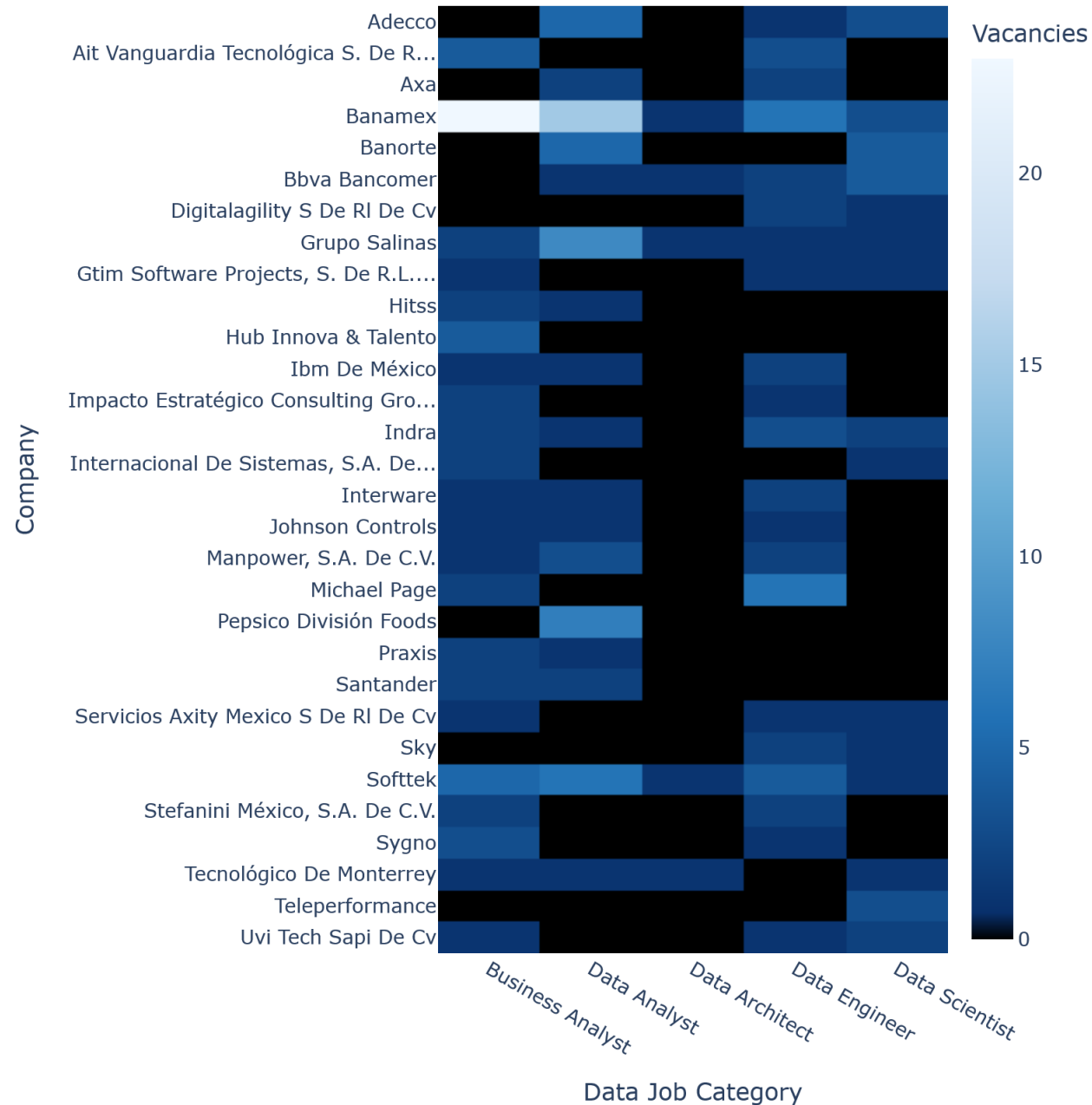
- What companies demand the most jobs in data?

Figure 4. Top 15 companies with the greater demand of data jobs in Mexico in August 2022 (own elaboration).

…Data Jobs Demand Analysis…

Figure caption / chart axis labels: Company (y-axis); Data Job Category (x-axis) with categories Business Analyst, Data Analyst, Data Architect, Data Engineer, Data Scientist; color scale labeled "Vacancies" ranging 0 to 20.

- How is the data jobs demand per company? **Data Scientist and Data Architect positions are more likely to be found in tech companies and banks.**

Figure 5. Data jobs demand per category and company (top 30) in August 2022 (own elaboration).

…Data Jobs Demand Analysis

- Where do companies demanding data jobs locate? **Mostly in Ciudad de México, Estado de México and Nuevo León.**
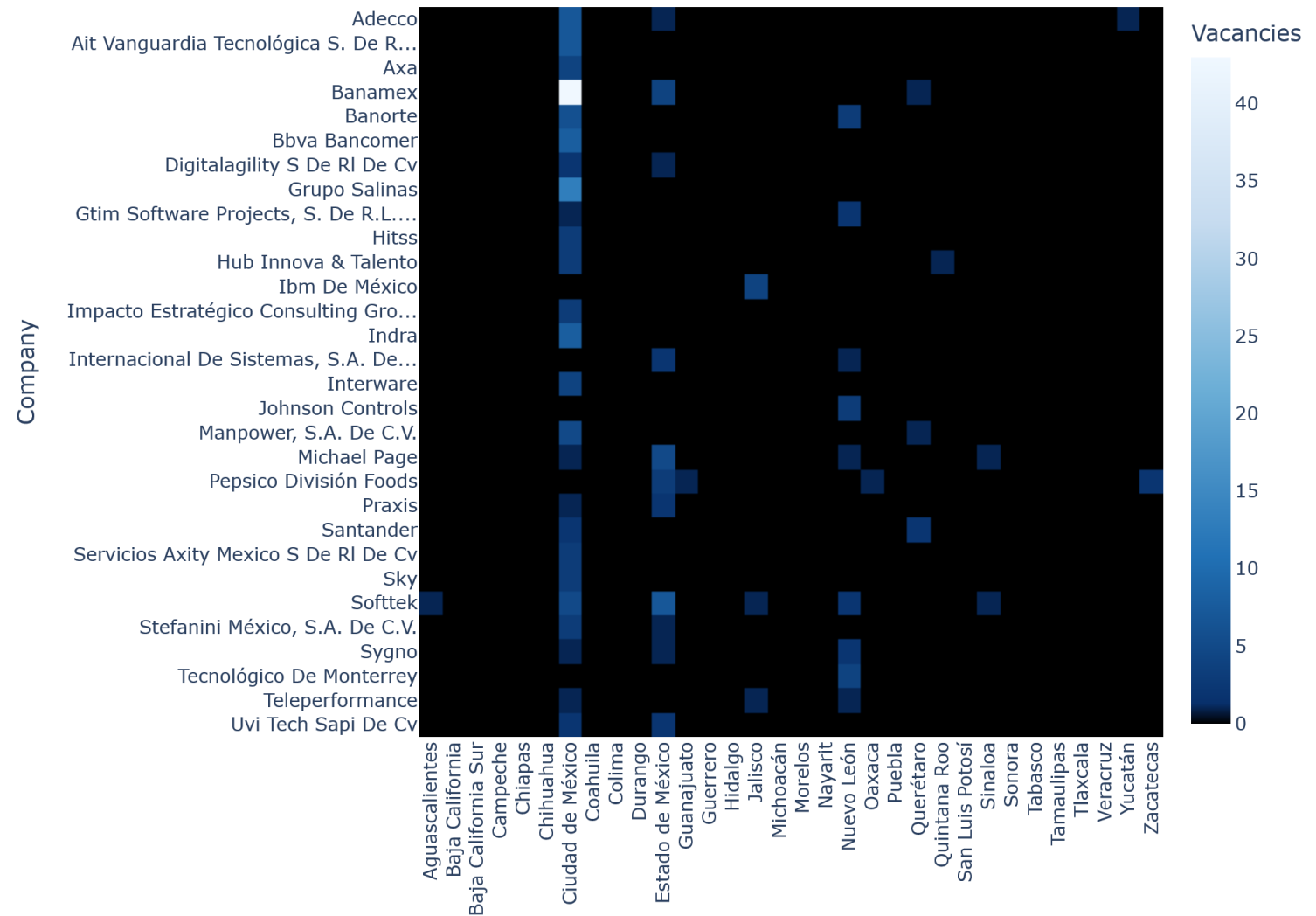

Figure 6. Top 30 companies demanding data jobs per location in August 2022 (own elaboration).

4. Salary Analysis...

- Sample of 157 jobs.

- For all data jobs: Average salary of **$31,179 MXN per month**.
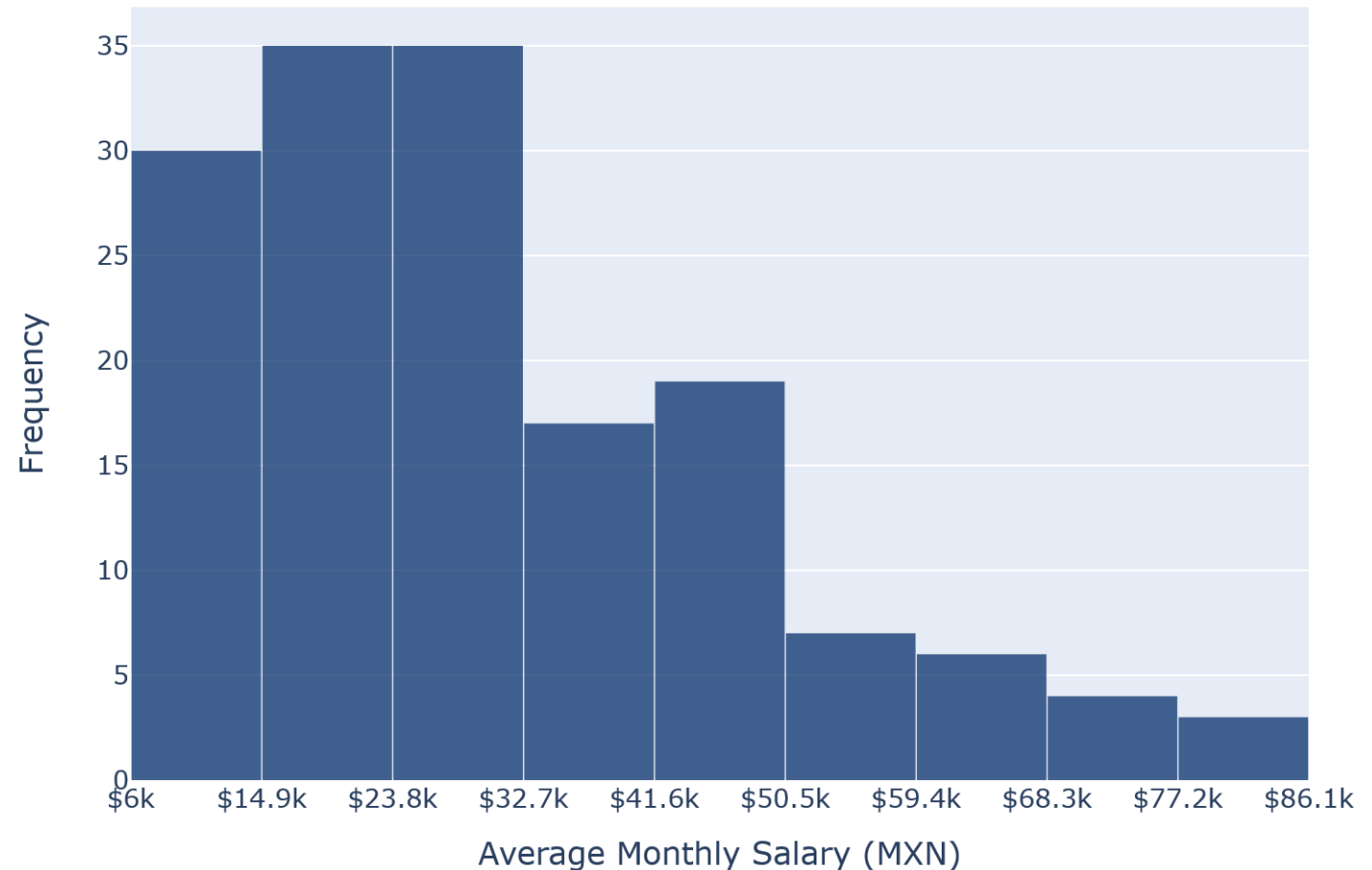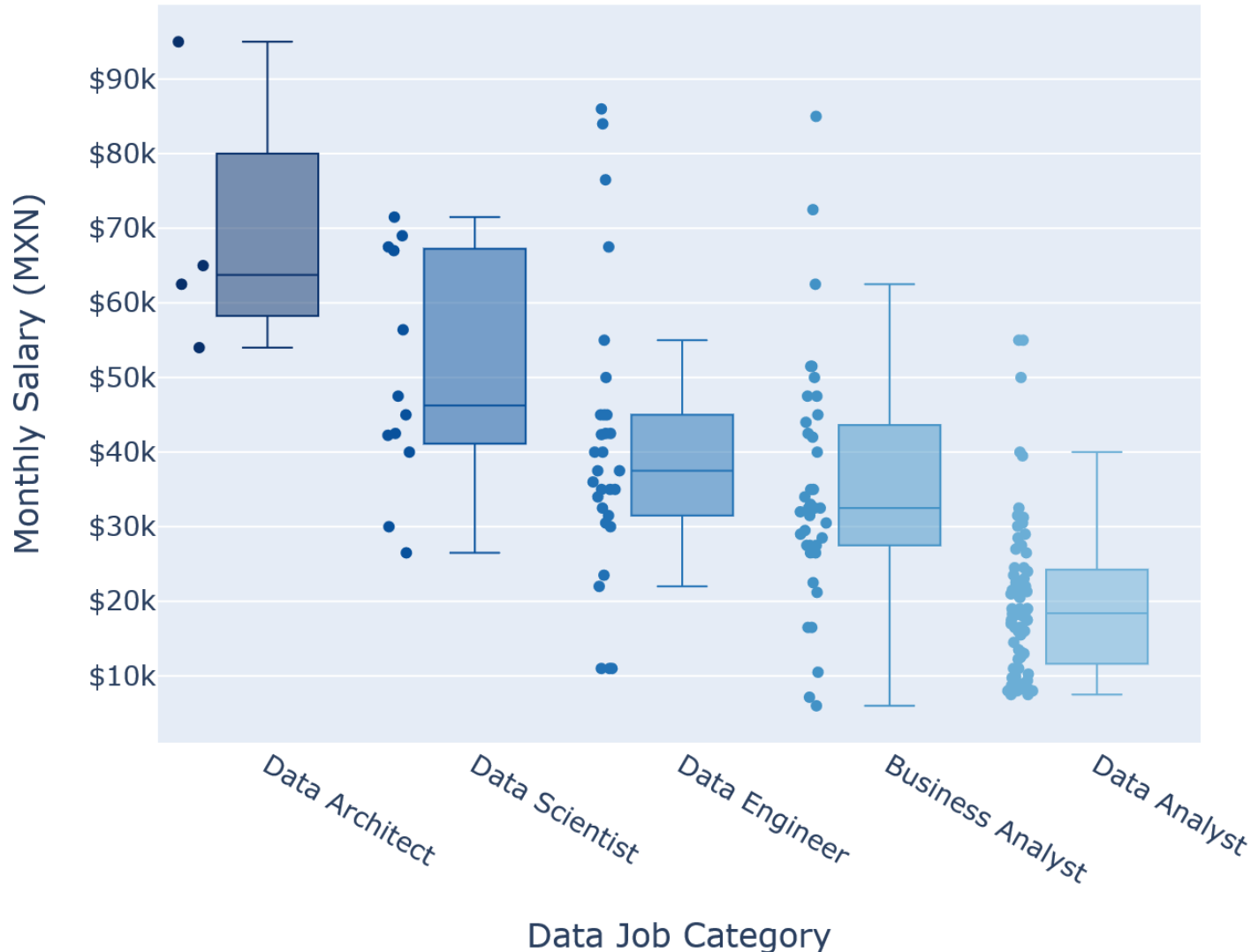

Figure 7. Histogram of salary distribution of the data jobs in Mexico in August 2022 (own elaboration).

…Salary Analysis…

- Which data job category has the highest average salary? **Data Architect & Data Scientist.**

(Difference in average salaries not statistically significant).

Figure 8. Box plot of salary distributions for each data job category in Mexico in August 2022 (own elaboration).

...Salary Analysis...

- Where are the highest salaries for data jobs? **Ciudad de México ($43,559 MXN in average).**
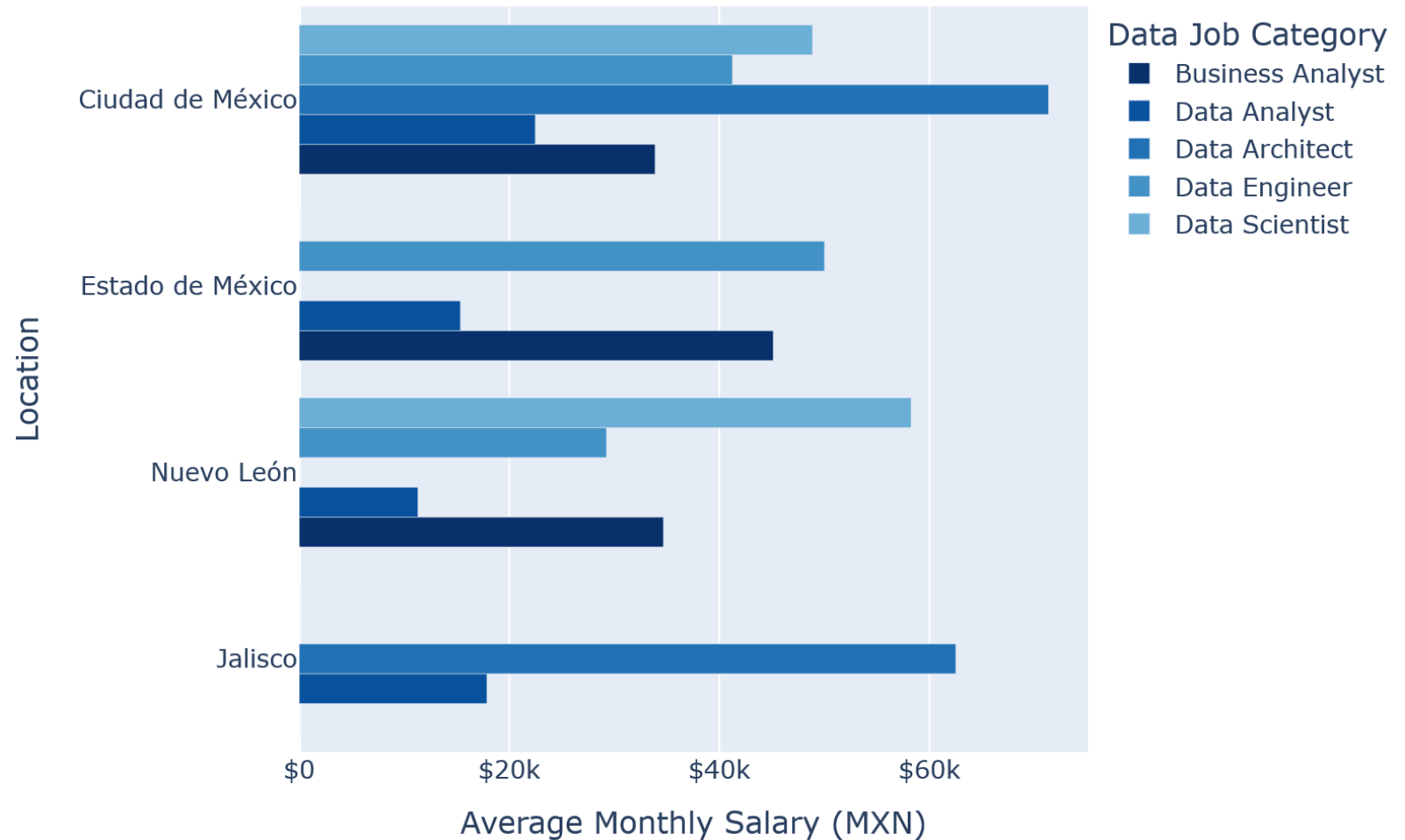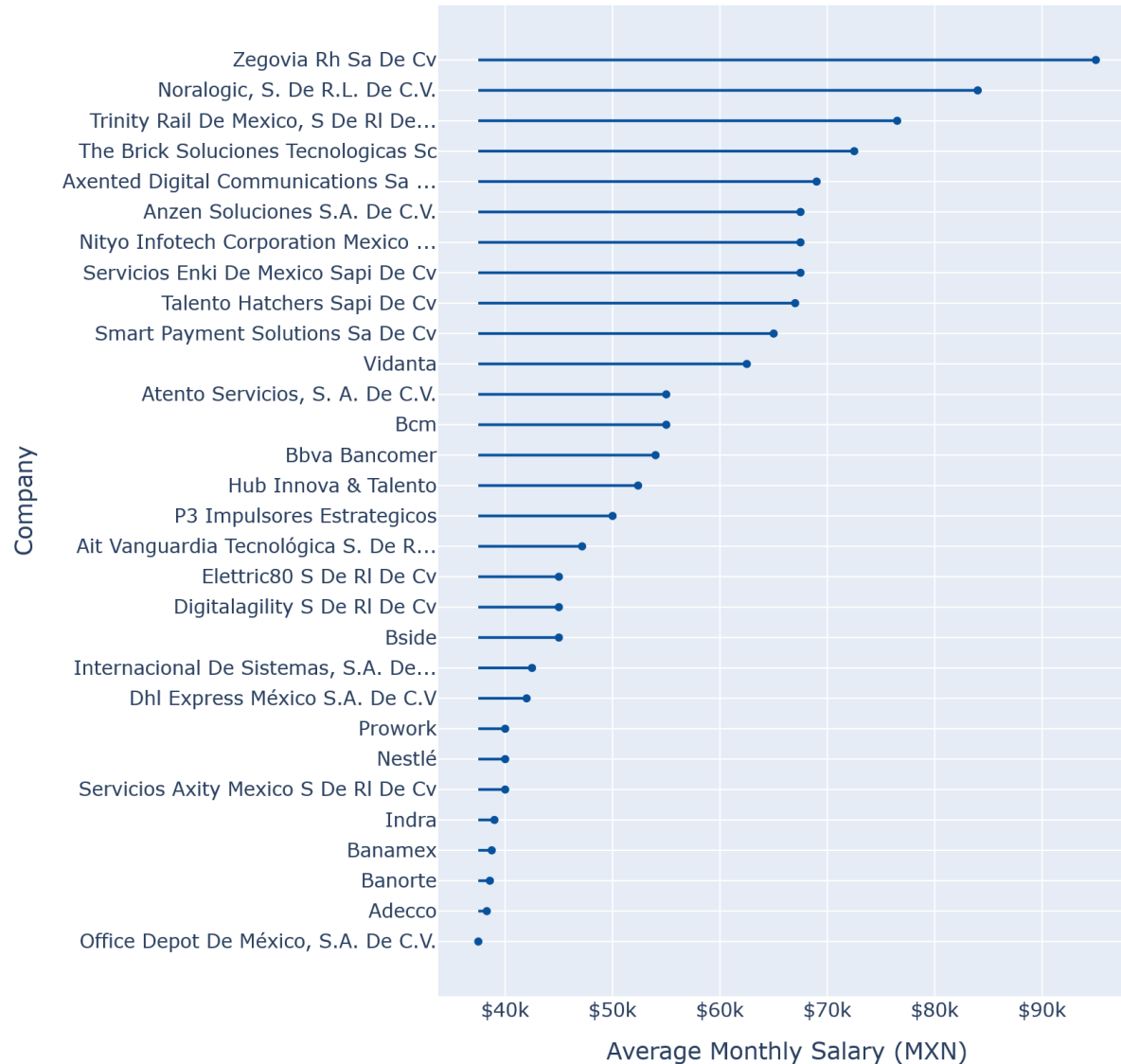

Figure 9. Average salaries for each data job category in Ciudad de México, Estado de México, Nuevo León, and Jalisco in August 2022 (own elaboration).

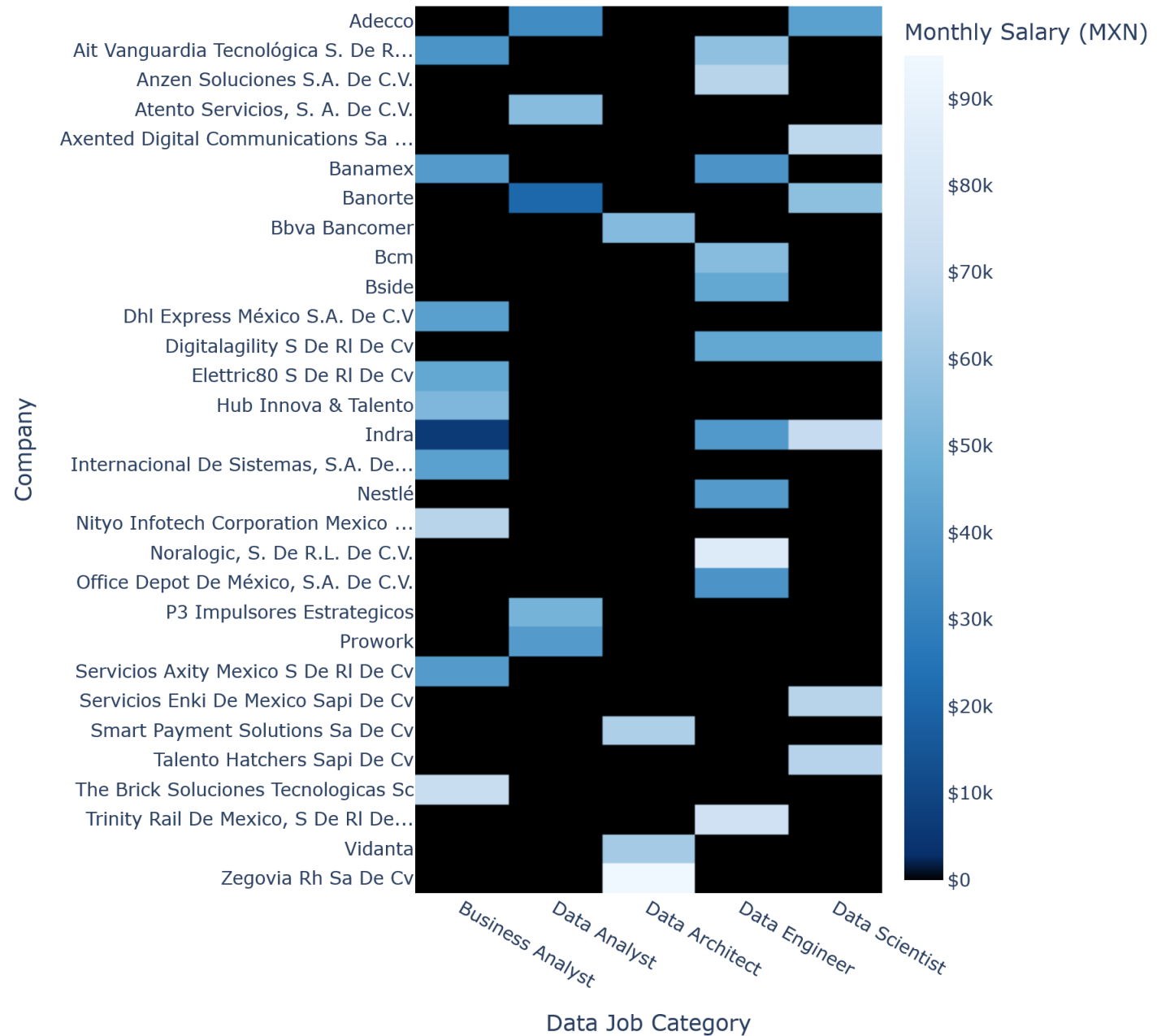# ...Salary Analysis...

- What companies offer the highest salaries for data jobs? **Zegovia RH, Noralogic and Trinity Rail de México.**

Figure 10. Top 30 companies with the highest average salaries for data jobs in Mexico (own elaboration).

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...Salary Analysis

- What companies offer the highest salaries for data jobs per data job category?

Figure 11. Top 30 companies with the highest average salaries by data job category in Mexico in August 2022 (own elaboration).

5. Conclusions...

- **Data Architect** and **Data Scientist** are the data job categories with the **highest salaries** in the Mexican labor market in August 2022 according to the OCC website.

- **Ciudad de México** is the place where it is possible to find the **highest jobs demand** and the **highest salaries**.

- **Banamex, Softtek,** and **Grupo Salinas** exhibit the **highest demand** of data jobs positions; while **Zegovia RH, Noralogic,** and **Trinity Rail de México** offer the **highest salaries**.

...Conclusions...

- **Data Analyst** is the data job category **more demanded** in the current Mexican labor market and across the different Mexican states, even though it was also the one with the **lowest salary**.

- **Data Analyst, Business Analyst,** and **Data Engineer** positions are more demanded **across different type of organizations and locations.**

- **Data Architect** and **Data Scientist** positions are **very concentrated** in Ciudad de México, Estado de México and Nuevo León, and are most likely to be found in **tech companies and banks**.

… Conclusions

- This study had **limitations**:
  - Only used OCC as source of information during a very short period of time (just 03 August 2022).
  - Very few salary observations were retrieved for Data Architect and Data Scientist positions.
  - Collected data mostly correspond to Ciudad de México, Estado de México, Nuevo León and Jalisco.
  - No distinction was made among entry level, middle and senior positions.

- **Future perspectives**:
  - Gather data from more job websites.
  - Retrieve information for a longer time span.
  - Collect more salary observations for Data Architect and Data Scientist positions.
  - Collect more salary data for other Mexican states.
  - Make a distinction among entry level, middle and senior positions.

6. References

- **Axis Talent. (2020).** *The Ecosystem of Data Jobs - Making sense of the Data Job Market.* Retrieved from Axis Talent: https://www.axistalent.io/blog/the-ecosystem-of-data-jobs-making-sense-of-the-data-job-market

- **Rollins, J. B. (2015).** *Metodología Fundamental para la Ciencia de Datos.* Somers: IBM Corporation. Retrieved from https://www.ibm.com/downloads/cas/WKK9DX51

Thank you for your attention!