

Analysis of the determinants of best devolope track

Introduction

If maximizing your income is your main goal when choosing a career, you're in the right place.

This project is here to help you discover which path in software development can lead to higher earnings especially if you're a student still figuring out which direction to take.

Research Question

How do experience level and work type influence salaries among different developer roles in Egypt?

Objective

To identify the most suitable and rewarding developer field for each student based on salary, experience level, and work type trends in Egypt

hypothesis

1. Role Salary Differences

Null: No salary difference by developer role.

Alternative: Salary differs by role.

2. Experience Impact

Null: Experience doesn't affect salary.

Alternative: Salary varies with experience.

3. Work Type Effect

Null: No salary difference by work type.

Alternative: Salary differs by work type.

4. City Location Impact

Null: No salary difference by city type.

Alternative: Salary differs by city type.

5. Employment Type Impact

Null: No salary difference by employment type (full-time vs part-time).

Alternative: Salary differs by employment type.

Obstacles & Challenges

Messy Job Titles: Too many varied roles — we narrowed it down to developers for clarity.

Inconsistent Salary Formats: Converted all salaries to clean EGP values.

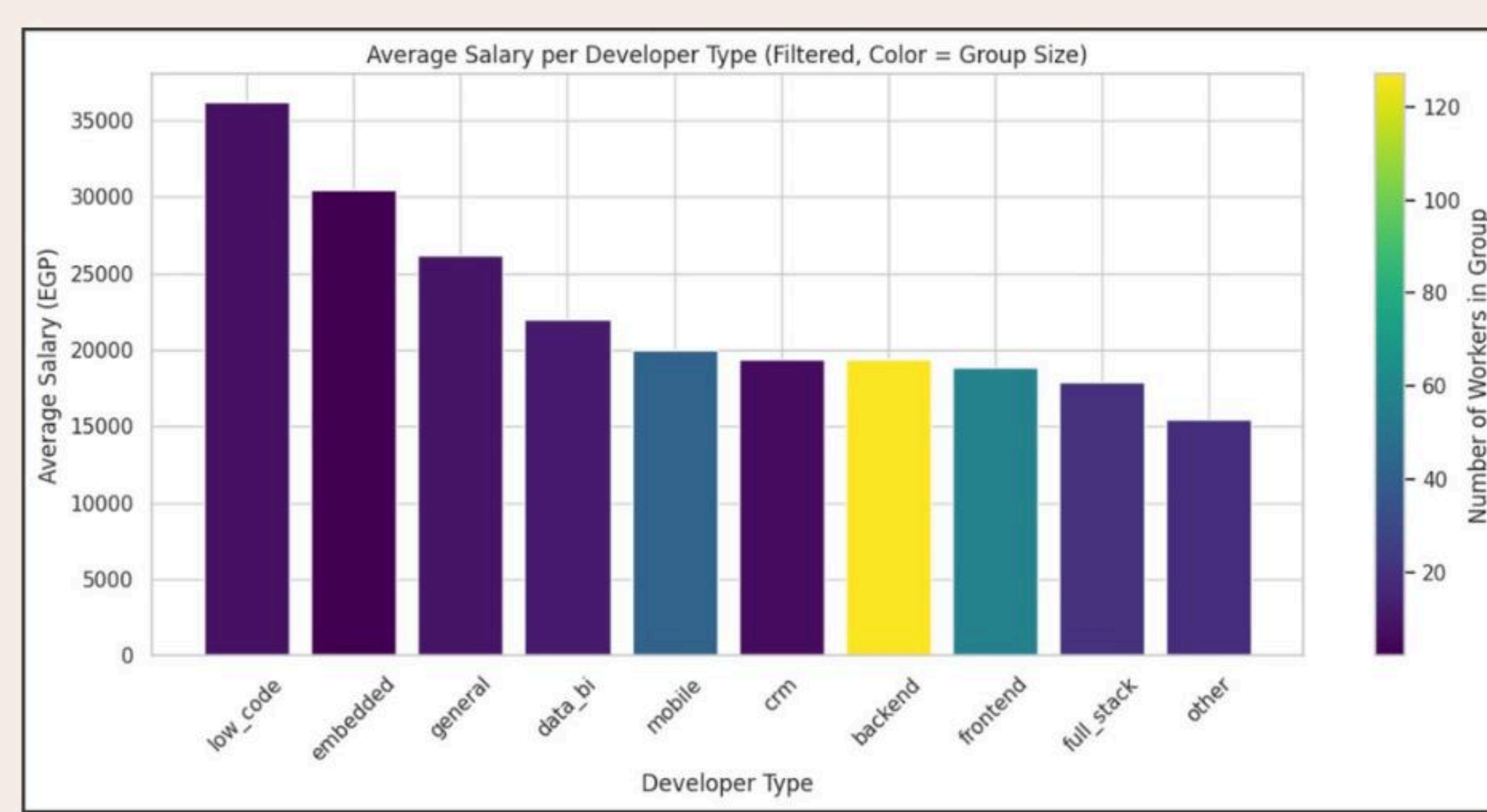
Non-Egyptian Data: Removed entries outside Egypt to avoid bias.

Missing Data: Many entries lacked salary info, reducing sample size.

Uneven Role Counts: Some roles had very few responses, affecting comparison.

Team Debate: Conflicting views on role-salary significance led us to add a scatter plot to confirm results.

analysis

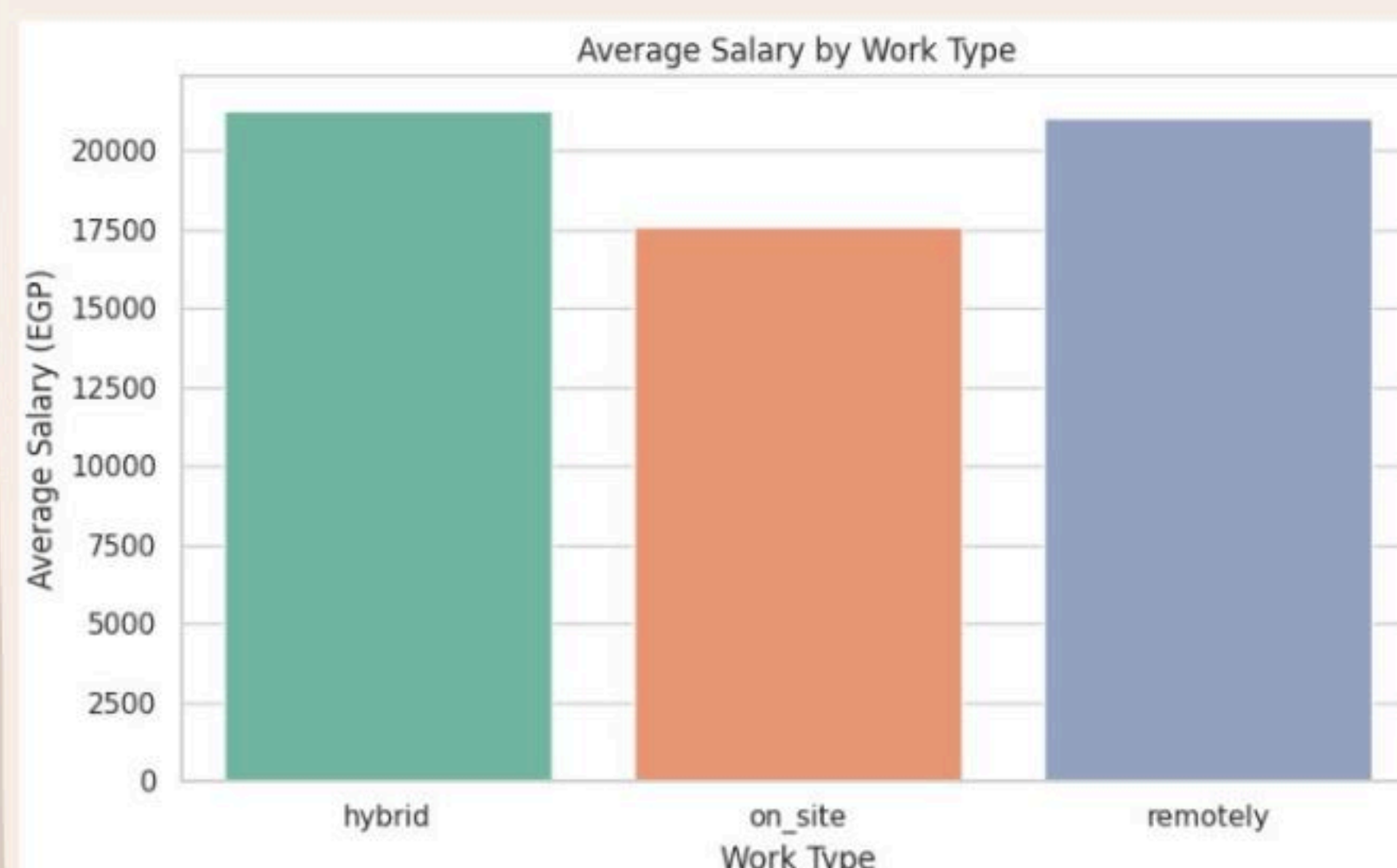


1. Role Differences Impact on salary

Result: Fail to reject the null hypothesis .
p-value: 0.2510

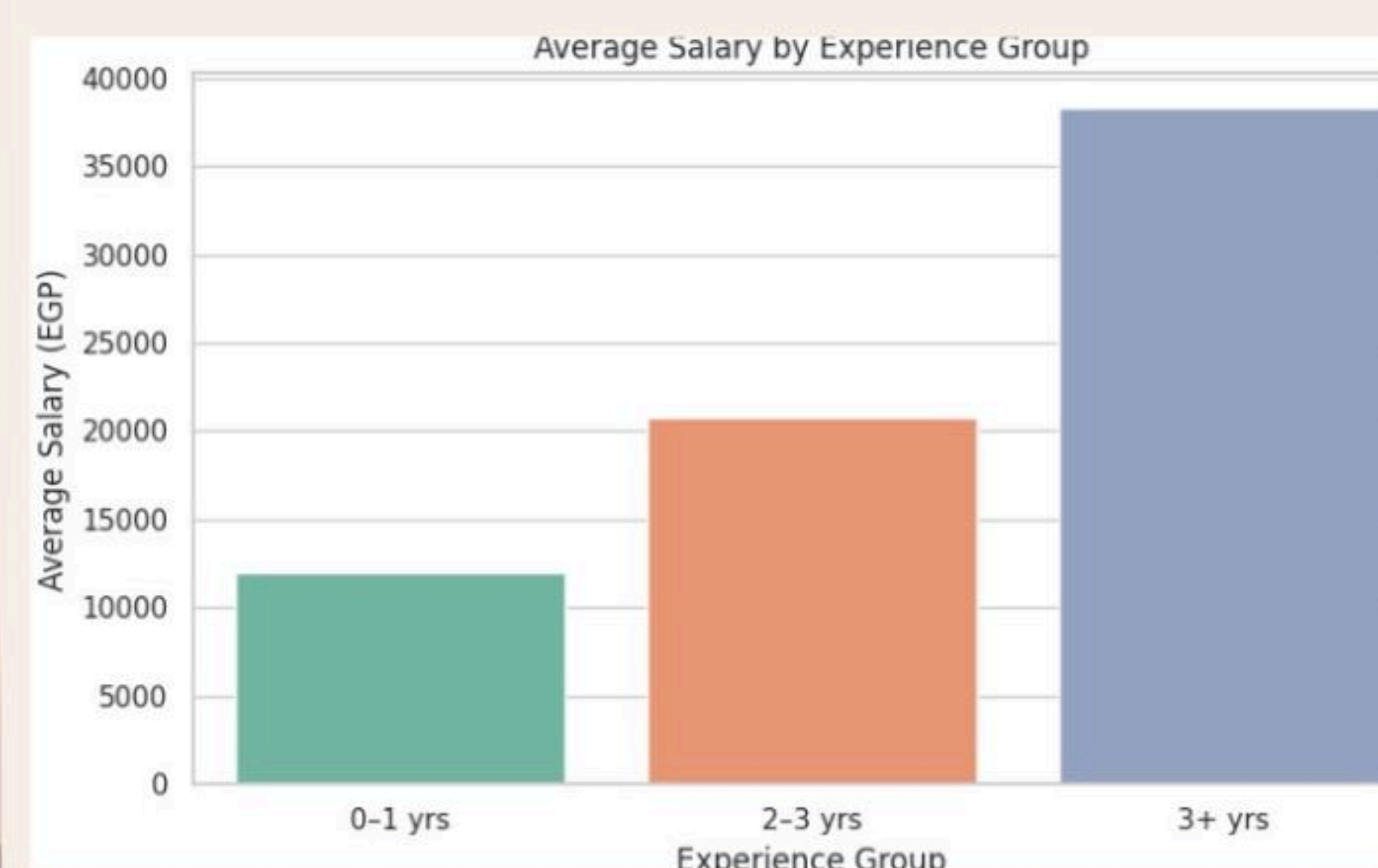
3. Work Type Effect on salary

Result: Fail to reject the null hypothesis .
p-value: 0.1925



2. Experience Impact on salary

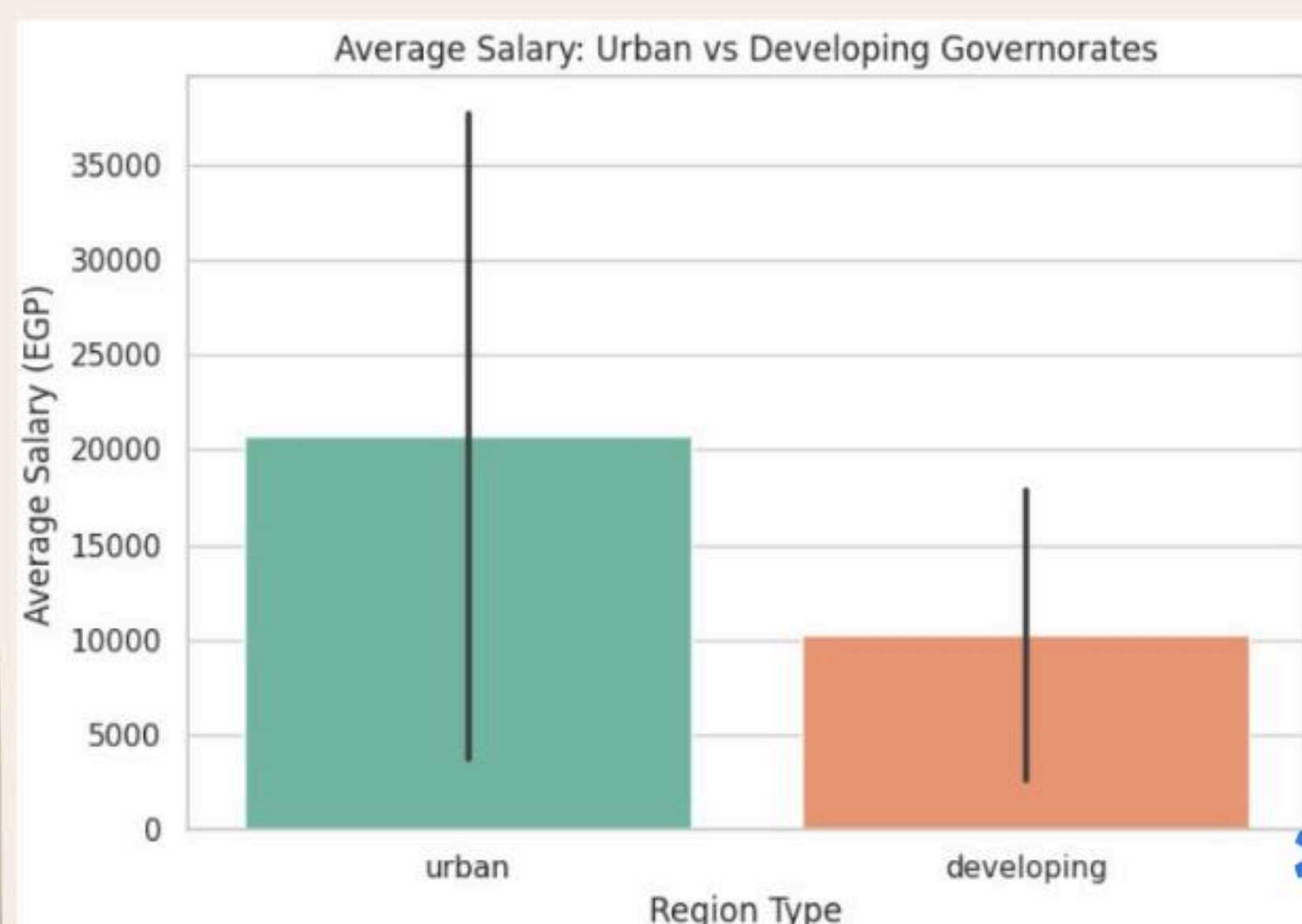
Result: Reject the null hypothesis .
p-value: 0.0000000000000000084353



4. City Location Impact on salary

Result: Reject the null hypothesis .

p-value: 0.0000009837



Conclusion

In the end, we found that there isn't a big salary difference between different developer tracks. However, location matters developers in urban cities earn significantly more than those in developing areas.

Also, whether you work remotely or on-site, the salary is nearly the same.

But the most important factor is experience the more experience you have, the higher your salary is likely to be.

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