Current Technological Landscape and Future Developments

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14/8/2024

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OUTLINE

- Executive Summary
- Introduction
- Methodology
- Results
  - Visualization – Charts
  - Dashboard
- Discussion
  - Findings & Implications
- Conclusion
- Appendix

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EXECUTIVE SUMMARY

- **Latest Trends in Software Development**
- **Programming Languages:** Current and evolving programming languages.
- **Database Systems:** Advancements in database technologies.
- **Development Platforms:** Key platforms used in software development.
- **Web Frameworks:** Latest frameworks for web application development.
- **Future Trends Overview**
- Insights into expected future developments in software development.
- **Demographic Analysis**
- **Global Technological Gaps:** Comparison of technology access between countries.
- **Gender Disparities in Tech Jobs:** Examination of gender gaps in technology-related roles.

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INTRODUCTION

- Identifying Future Skills: Understanding the skills that will be in demand next year.

- Top 10 Programming Languages: A list of the most sought-after programming languages in the market.

- Top 10 Database Skills: The most in-demand skills related to databases.

- Popular Future Trends: An overview of anticipated ideas and trends likely to emerge in the near future.

METHODOLOGY

- Data Collection:
  - Collecting data via APIs and web scraping.

- Data Cleaning:
  - Removing duplicates and imputing missing values.
  - Normalizing data and handling outliers.

- Exploratory Analysis:
  - Analyzing data distribution and correlations.

- Data Visualization:
  - Visualizing data distribution, relationships, composition, and comparisons.
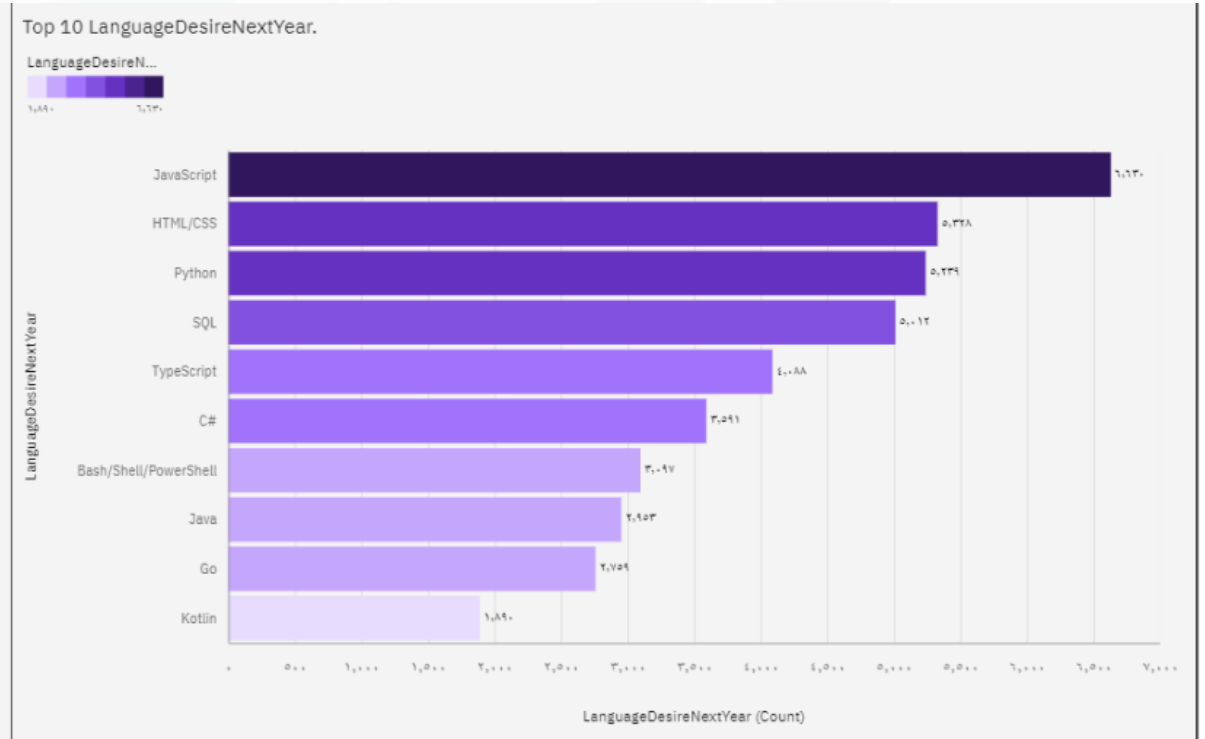 - Building dashboards.

RESULTS

PROGRAMMING LANGUAGE TRENDS

Current Year
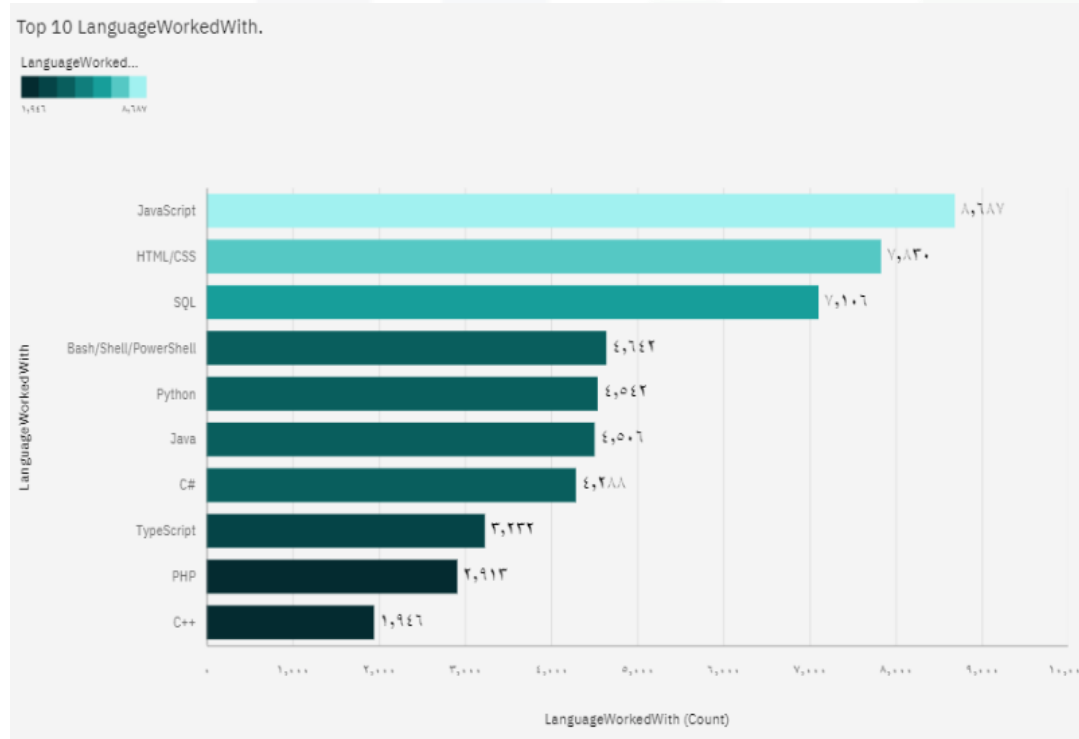
Next Year

PROGRAMMING LANGUAGE TRENDS - FINDINGS & IMPLICATIONS
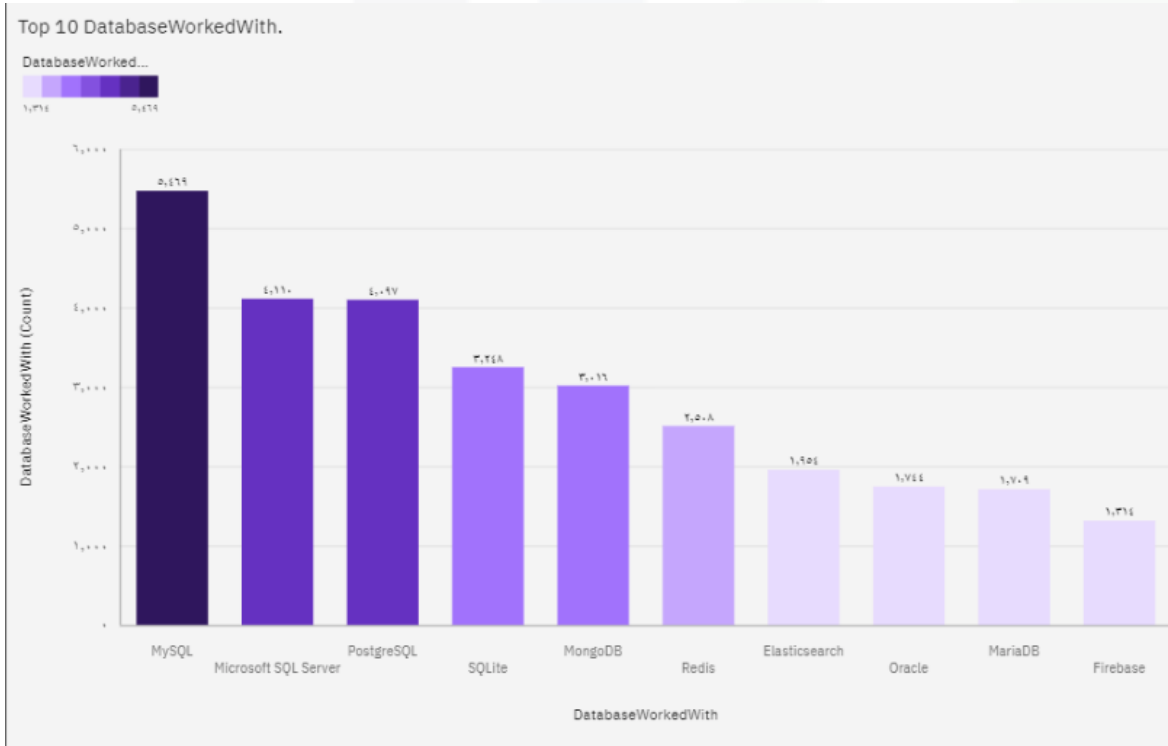
Findings

- Currently in High Demand: JavaScript, HTML, CSS, SQL, Bash, and Python are all in strong demand.

- Future Trends: Python is expected to become even more popular next year.

- Decreasing Popularity: Powershell is anticipated to see a decline in usage next year.
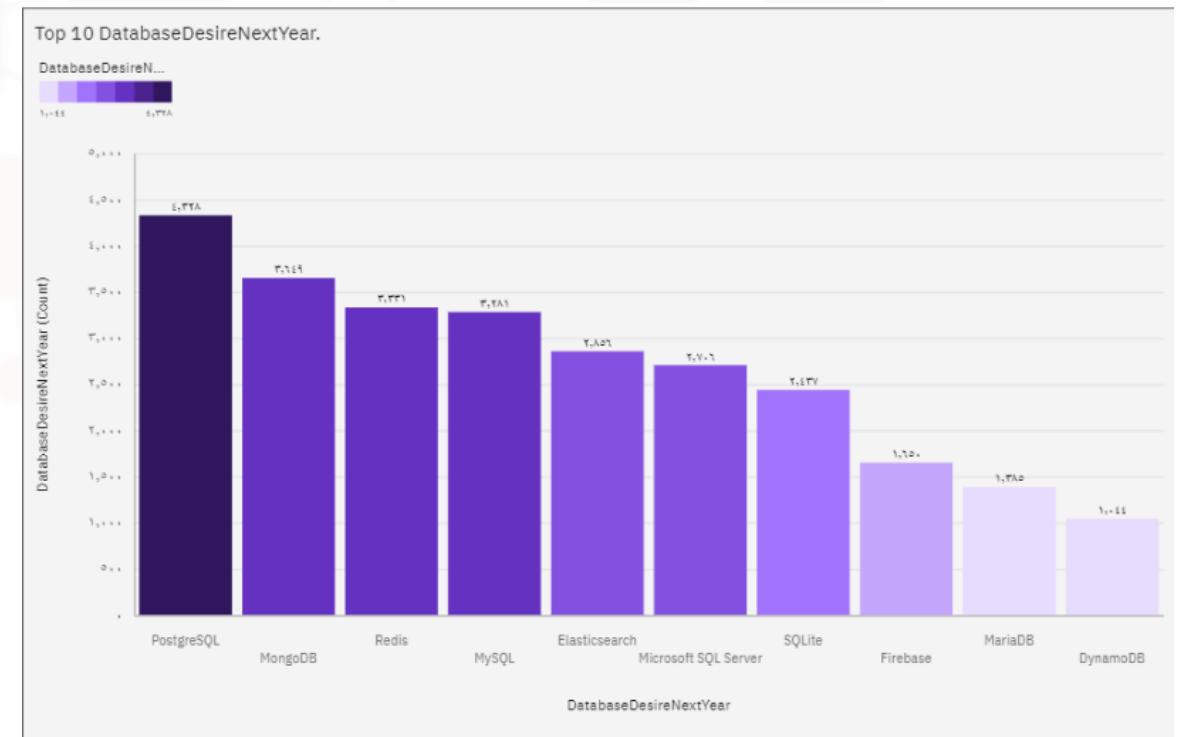
Implications

- Programming Languages (JavaScript, Python, and HTML/CSS): These languages will continue to be in demand both now and in the coming years.

- Web Development: Will remain a highly sought-after tech skill with significant future relevance.

- SQL: Continues to be a critical language for data professionals and is essential for Data Analysts and Business Analysts.

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DATABASE TRENDS

Current Year

Next Year

DATABASE TRENDS - FINDINGS & IMPLICATIONS

Findings

- Current Trends: Microsoft SQL and ElasticSearch are the most commonly used databases. MySQL is popular now, but PostgreSQL is expected to be preferred next year.

- Emerging Preferences: PostgreSQL and MongoDB are gaining traction, while Cassandra and Firebase show low interest. Couchbase remains the least favored.

Implications

- Market Shift: Microsoft SQL Server and ElasticSearch are losing ground, with PostgreSQL becoming the new preferred choice.

- Declining Popularity: Couchbase is being replaced by other databases, and MySQL is showing a declining trend.

- Growing Interest: Elasticsearch, Redis, and MongoDB are increasingly desired, indicating a shift in database preferences.
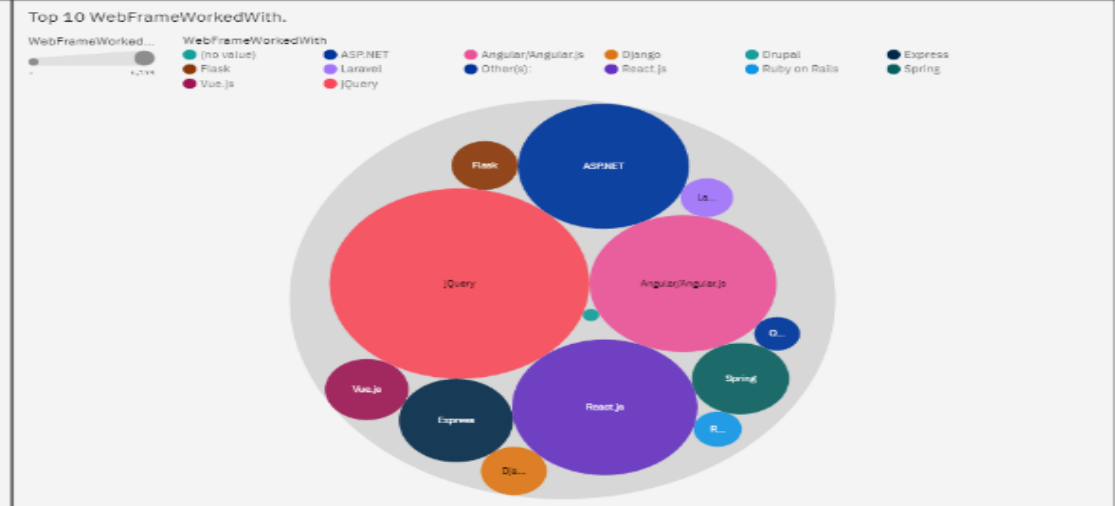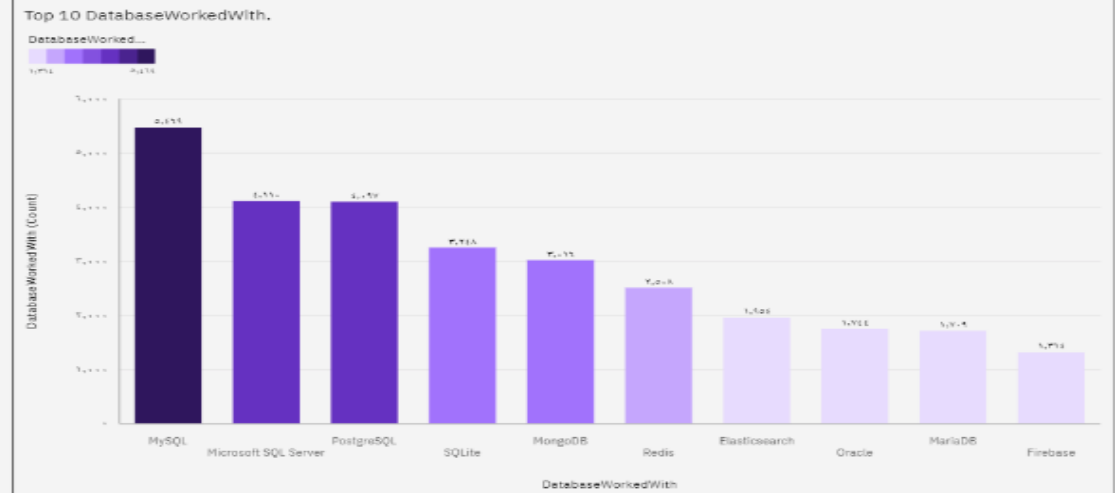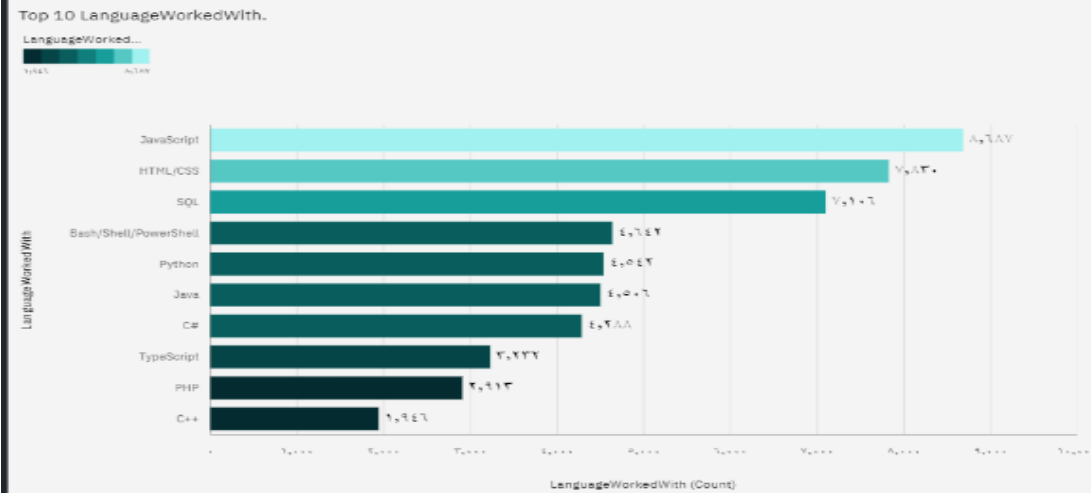
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DASHBOARD

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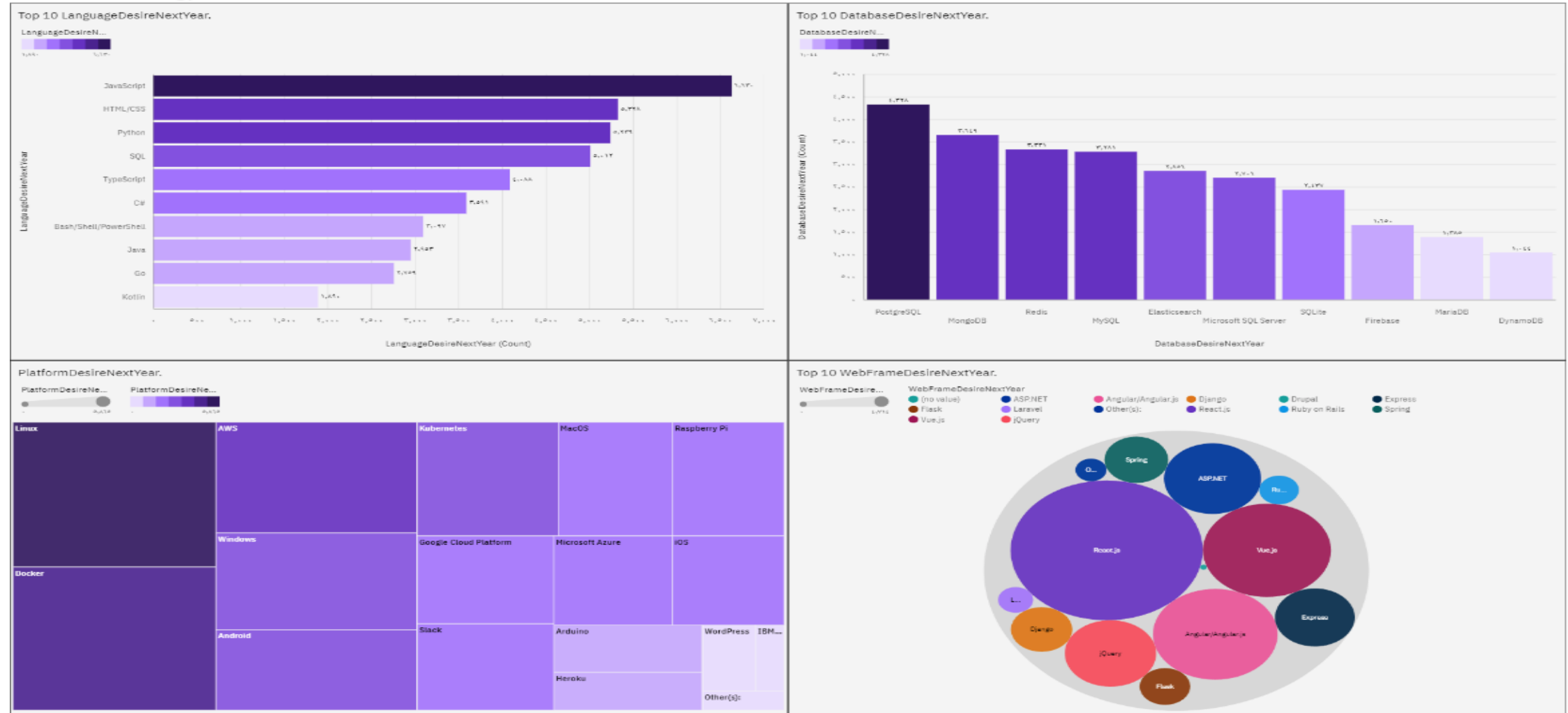
DASHBOARD TAB 1

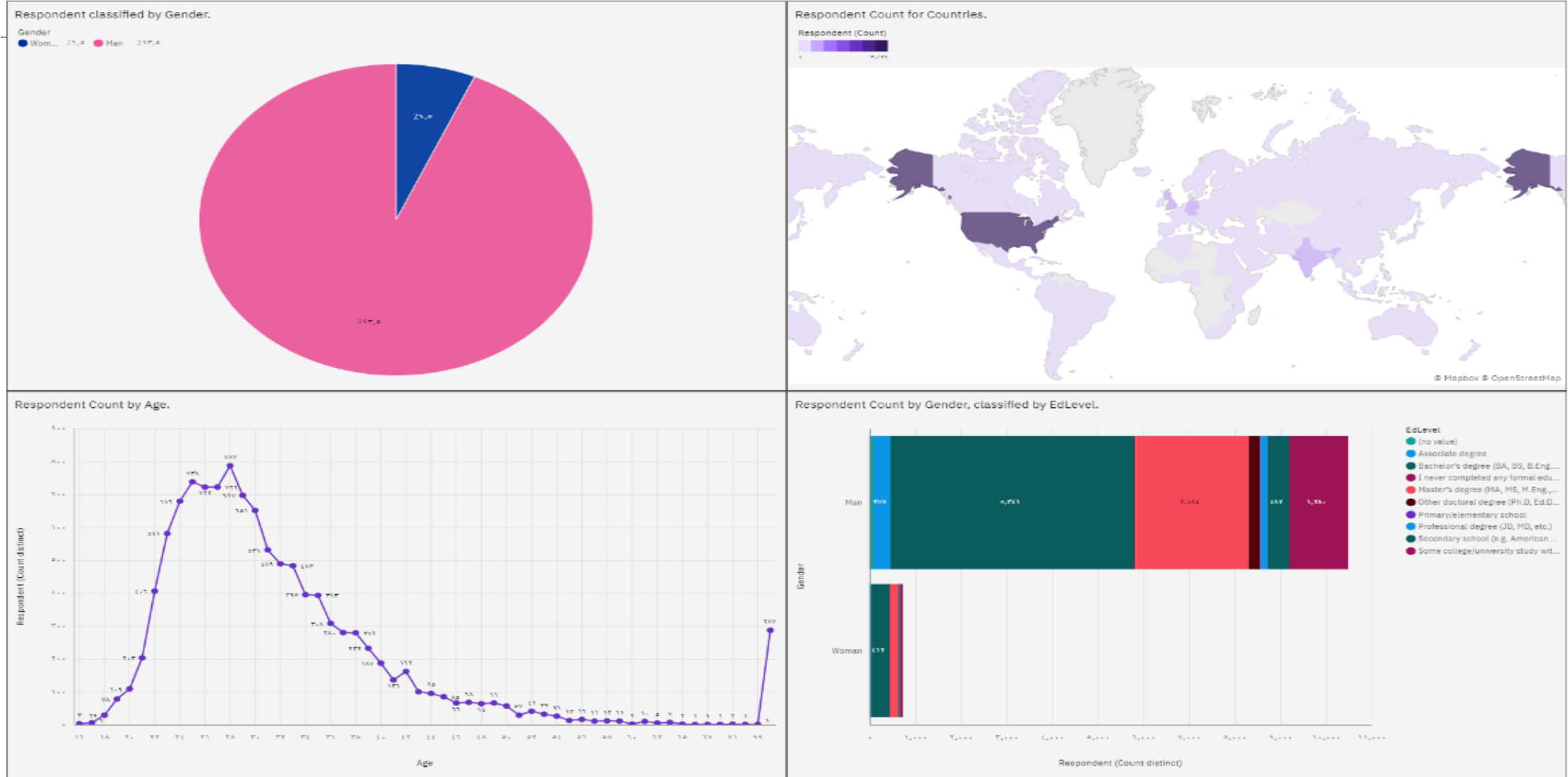# DASHBOARD TAB 2

DASHBOARD TAB 3

DISCUSSION

- Why is PostgreSQL expected to be more popular next year compared to MySQL?

- What are the reasons behind the growing interest in PostgreSQL and MongoDB?

- How are Microsoft SQL Server and ElasticSearch losing popularity?

- Why does Couchbase remain less popular compared to other databases?

- What does the increasing interest in Elasticsearch, Redis, and MongoDB indicate about future trends?

OVERALL FINDINGS & IMPLICATIONS

Findings

- Education: Most IT professionals hold a Bachelor's degree.
- Current Trends: Web development languages and advanced programming languages are popular.
- Future Interests: PostgreSQL and React JS are in high demand for learning next year.
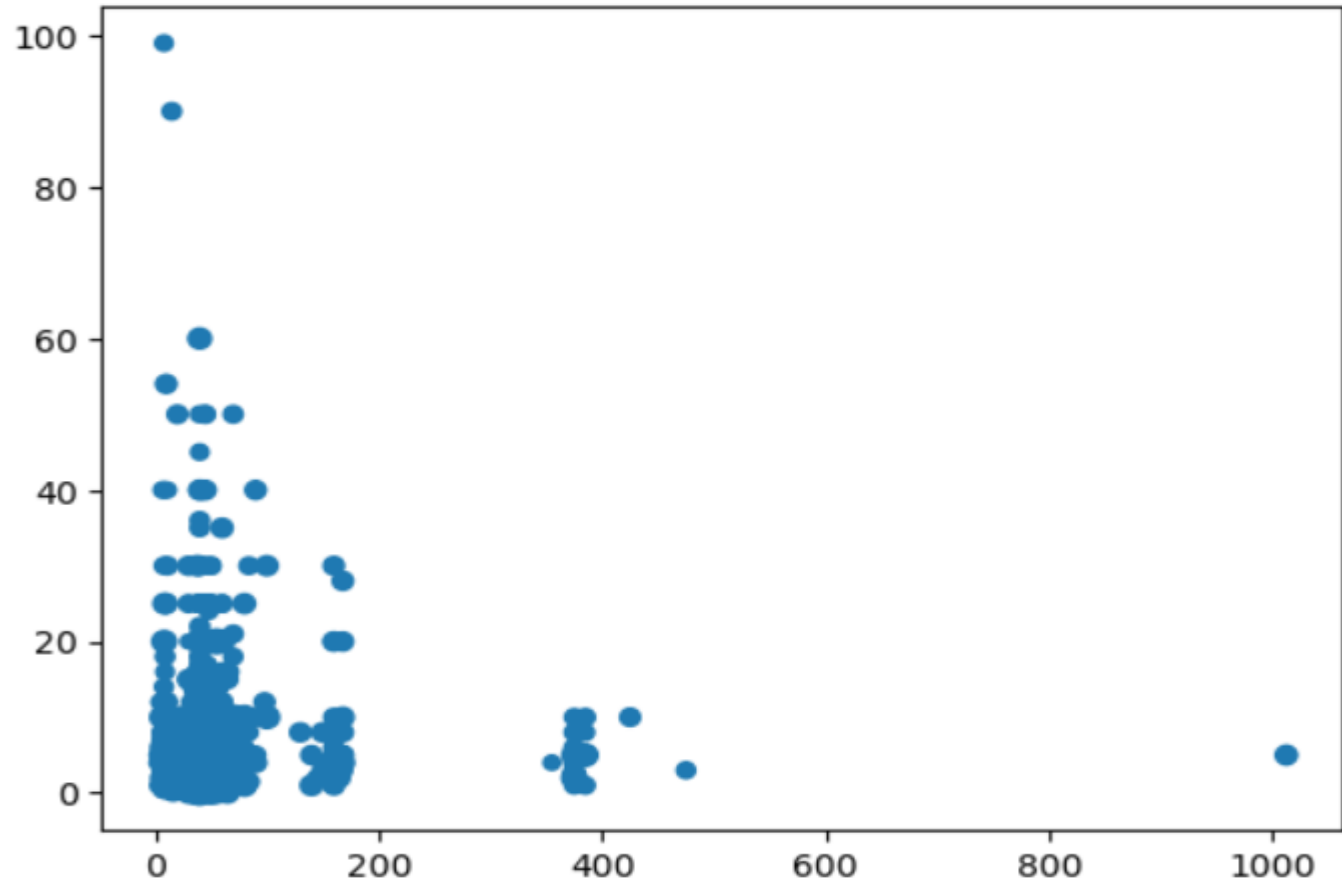- Database Trends: Non-relational databases are becoming more popular.

Implications

- Skills Focus: There is a growing need for expertise in both SQL and NoSQL databases.
- Big Data: The demand for Big Data skills is increasing due to its broad applications.
- Web Development: Web development remains a valuable skill.
- Tech Education: More tech training is needed, especially in less developed countries.
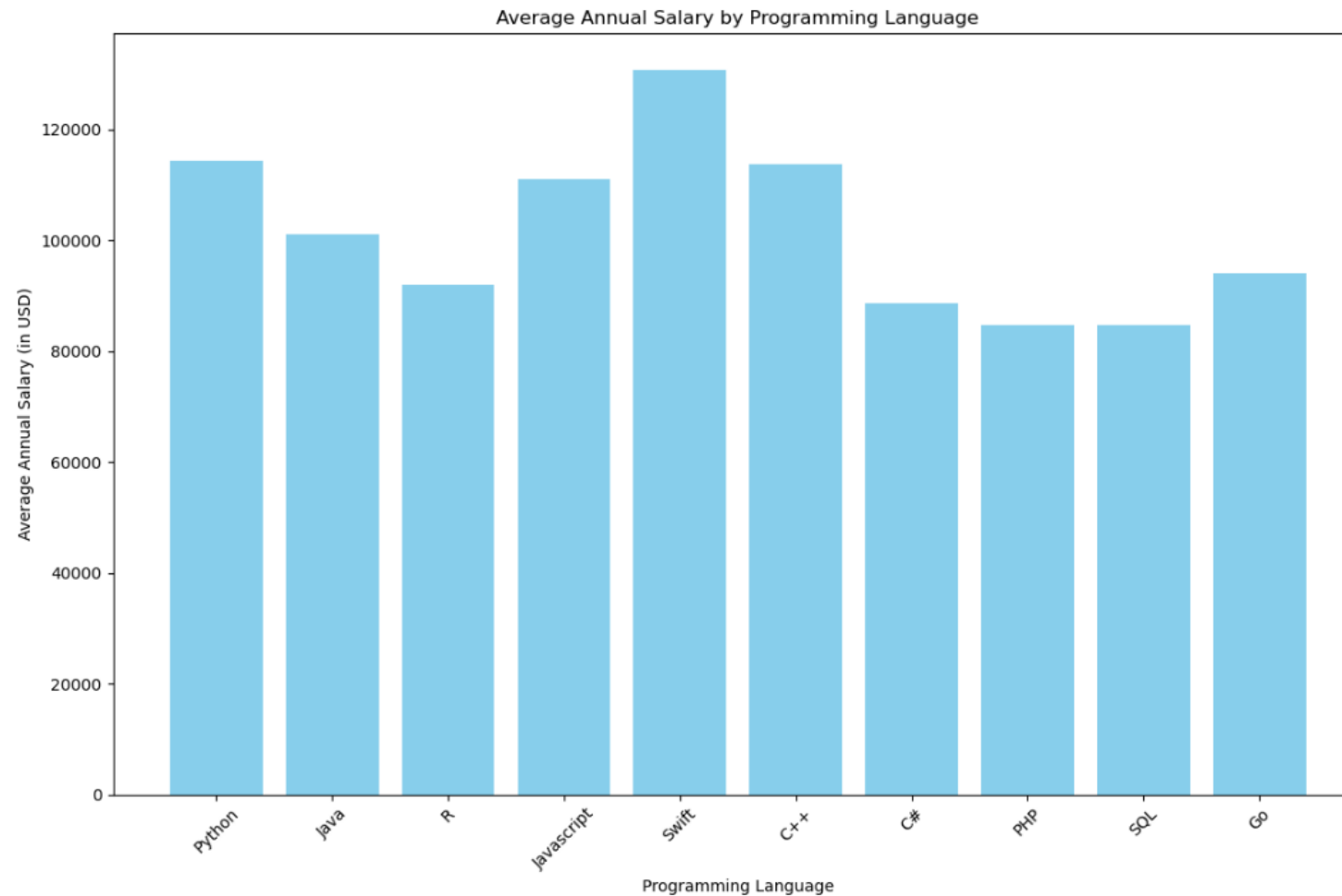
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CONCLUSION

- Characteristics and Trends: Developers have distinct characteristics, and understanding the popularity trends of tools, platforms, and languages is valuable.

- Updating and Training: It is crucial to keep skills updated in the tech sector as trends evolve, and to improve access to this job market in developing countries.

- Future Demand: Web development skills and Big Data with NoSQL are expected to be in high demand in the future.

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APPENDIX

JOB POSTINGS

POPULAR LANGUAGES

Average Annual Salary by Programming Language