



Trend Analysis Of Programming Languages and Databases

Atanu Chakraborty

DATE: 04.08.24

OUTLINE



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

EXECUTIVE SUMMARY



- Programming Language Trend Comparison: Current vs Future
 - Findings
 - Implications
- Database Trend Comparison: Current vs Future
 - Findings
 - Implications
- Dashboard
- Job Opportunities
- High-Paying Programming Languages

INTRODUCTION



- Objective: Analyze evolving trends in programming languages and databases.
- Significance: Understand their impact on technology and career opportunities.
- Scope: Cover popular languages, emerging technologies, and industry shifts.
- Expected Outcomes: Identify key trends and forecast future developments.
 - New roles and skills in demand.
 - Insights for applying trends to project development and strategic planning.

METHODOLOGY



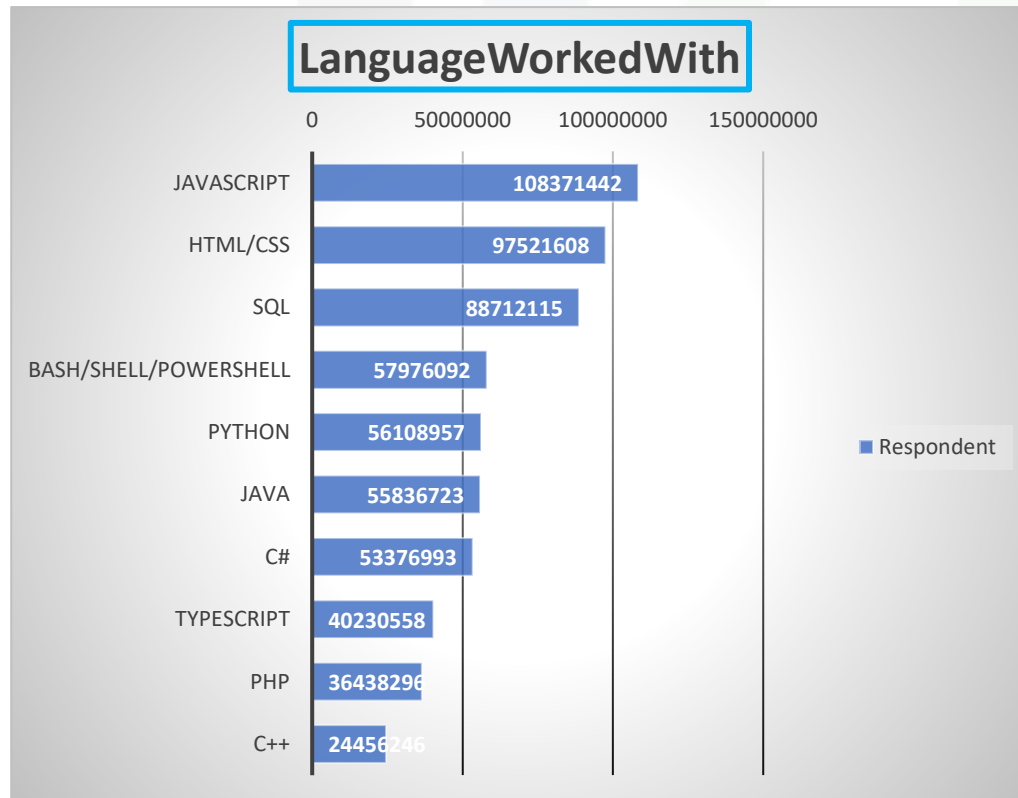
- Collect popular programming languages and databases data from GitHub Jobs API and various websites by using Python.
- Data Wrangling by using Python's Pandas library.
- Data Analysis by using Python's Pandas library.
- Data Visualization By using Python, Excel and IBM Cognos
 - Charts
 - Dashboard

RESULTS

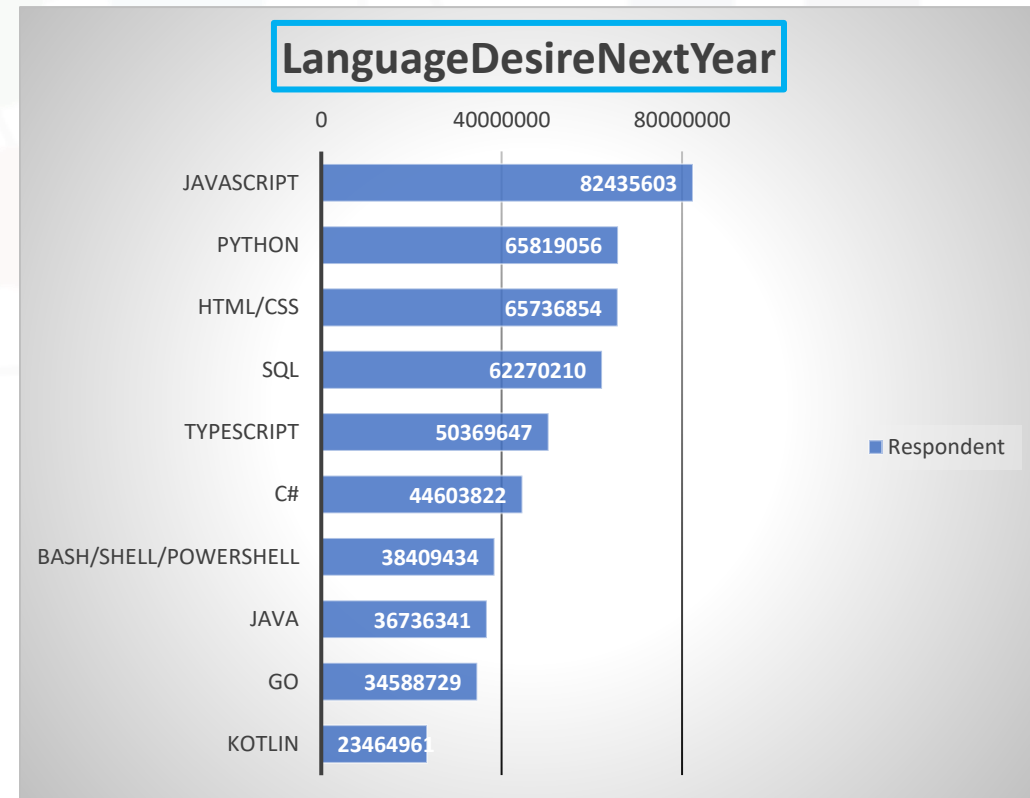
Results are explained in below slides →

PROGRAMMING LANGUAGE TRENDS

Current Year



Next Year



PROGRAMMING LANGUAGE TRENDS - FINDINGS & IMPLICATIONS

Findings

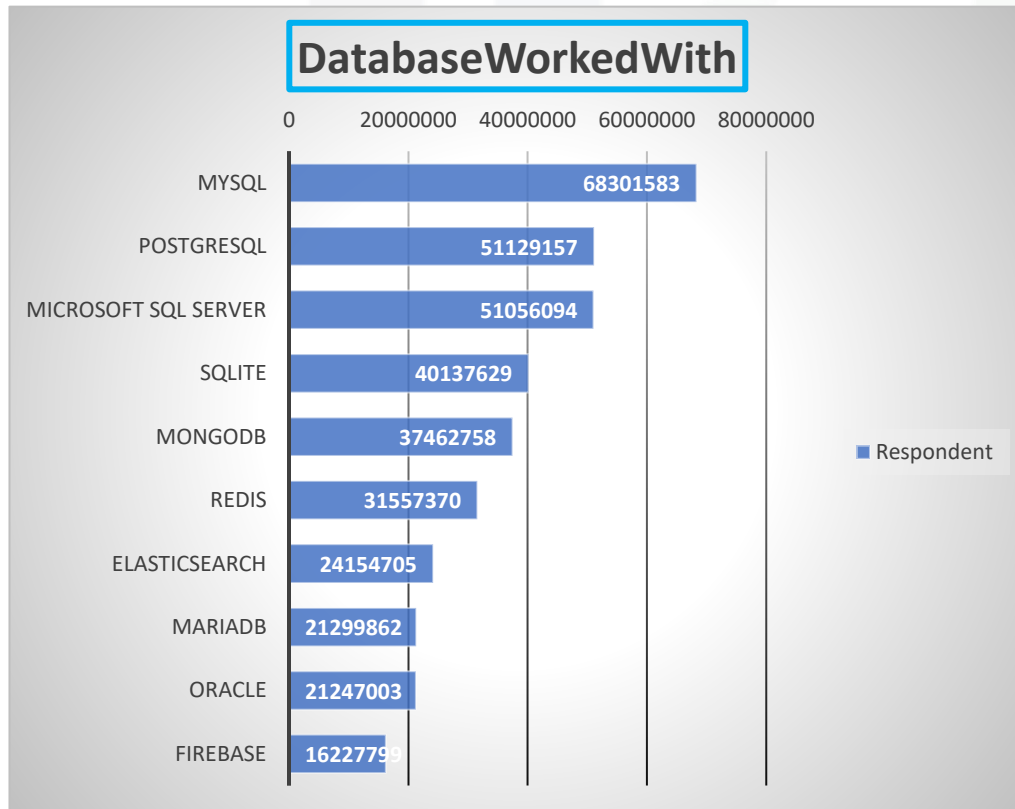
- JavaScript hold its position year by year.
- Python's popularity is increasing daily.
- PHP and C++ are becoming less popular over time.

Implications

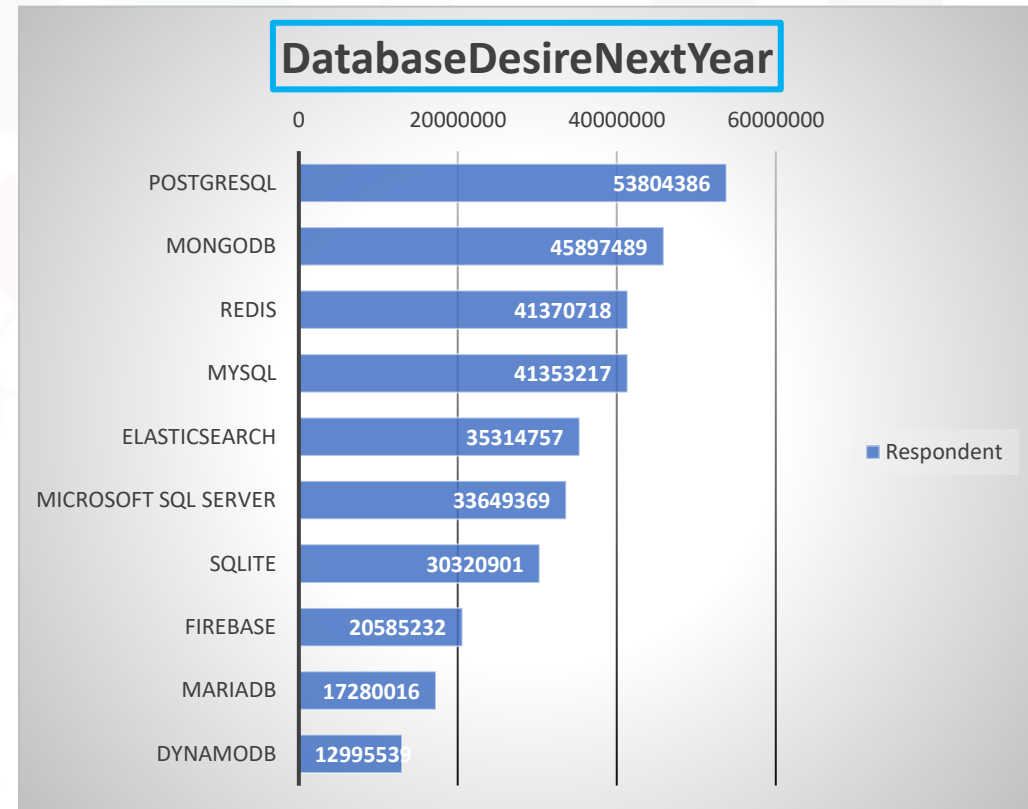
- Popular languages like Python and JavaScript offer more job opportunities.
- High-demand languages lead to better salaries.
- Learning emerging languages ensures ongoing industry relevance.

DATABASE TRENDS

Current Year



Next Year



DATABASE TRENDS - FINDINGS & IMPLICATIONS

Findings

- PostgreSQL's popularity is increasing over time.
- MySQL's popularity has slightly decreased.
- Oracle's popularity is gradually declining.

Implications

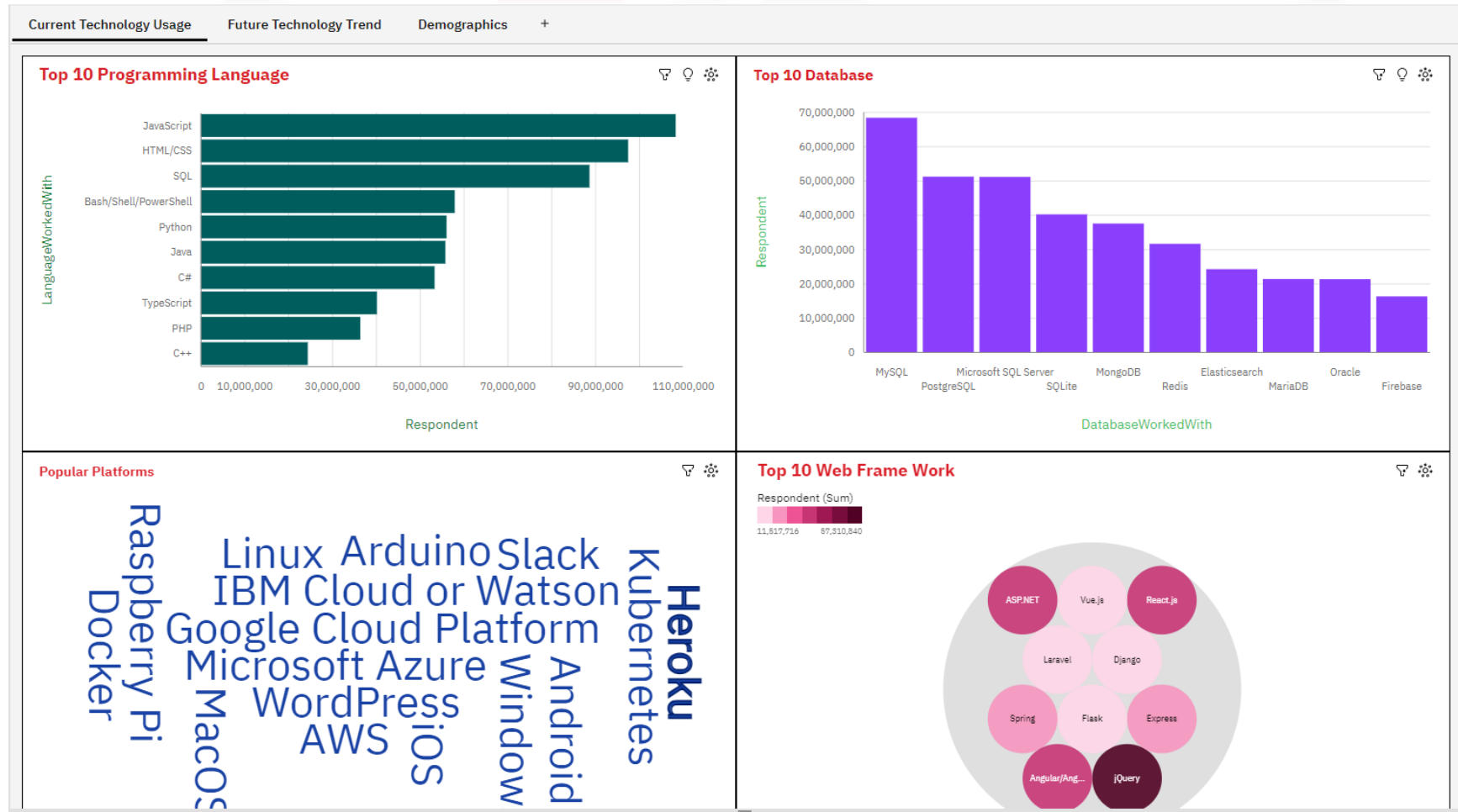
- Businesses may switch to cost-effective databases like PostgreSQL, reducing IT expenses.
- Increased demand for PostgreSQL skills (e.g., in startups) as MySQL and Oracle skills decline.
- Companies like Oracle must innovate to compete with rising alternatives such as PostgreSQL.

DASHBOARD

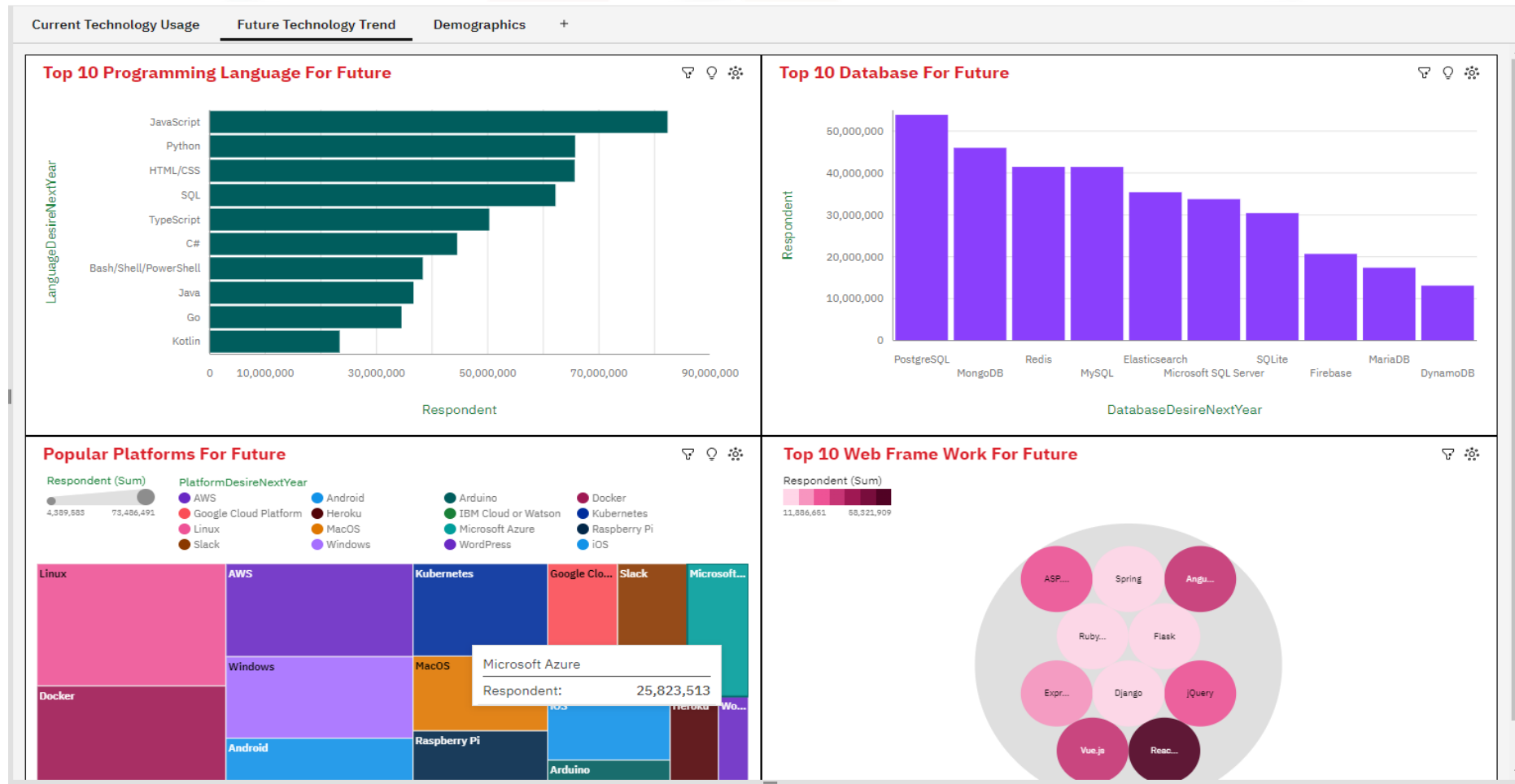


[SURVEY DASHBOARD- IBM COGNOS](#)

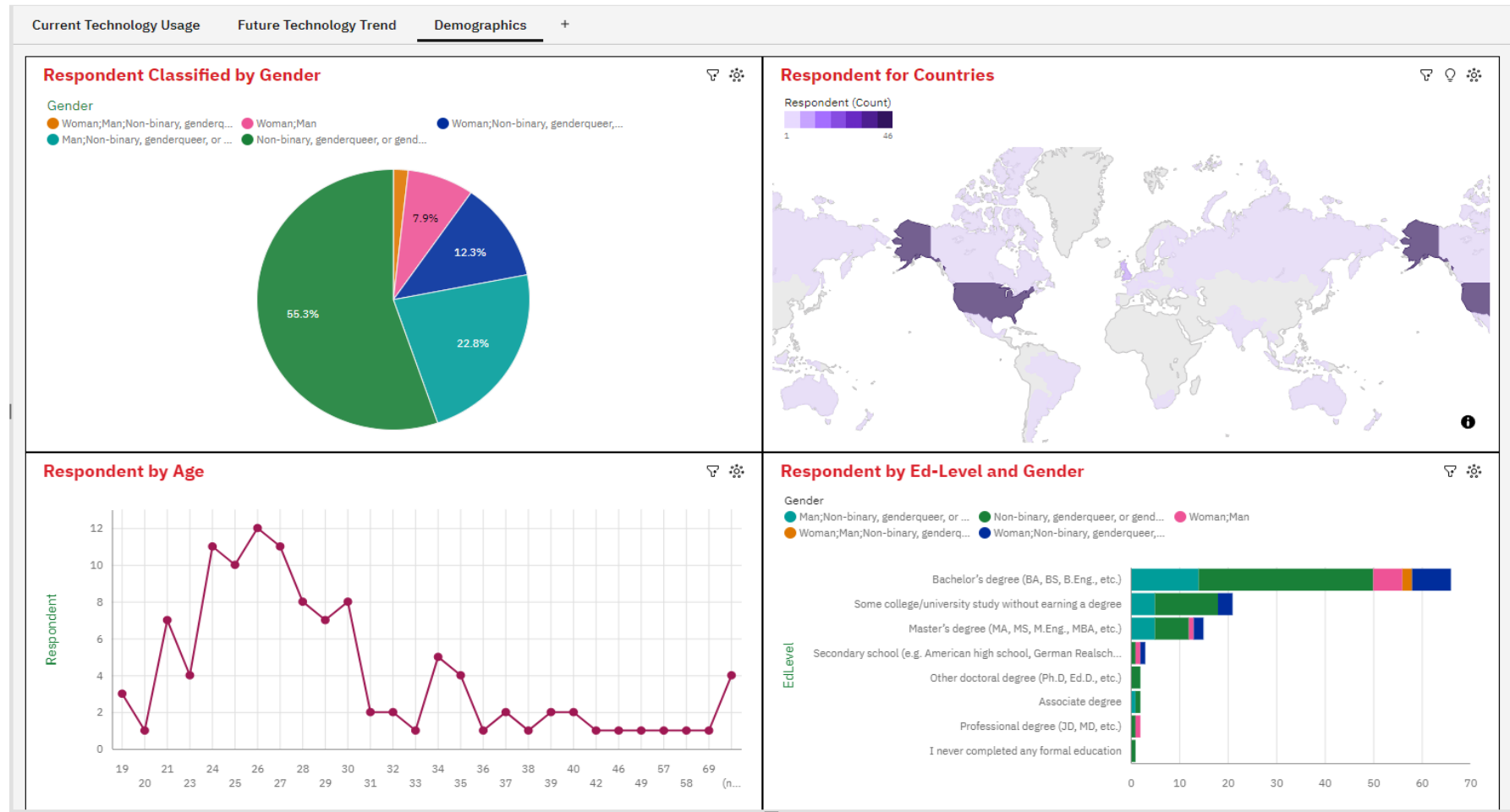
DASHBOARD TAB 1



DASHBOARD TAB 2



DASHBOARD TAB 3



DISCUSSION



Discussions explained in below
Slide →

OVERALL FINDINGS & IMPLICATIONS

Findings

- Python and JavaScript dominate the current market.
- Relational databases are current favourites. Multi-Model and Cloud-Native databases are becoming more popular.
- Companies are adopting newer programming languages and databases to meet modern demands.

Implications

- Transition to newer languages and databases for better performance.
- Use cloud-native databases to enhance scalability and reduce management.
- Integrate real-time data processing for better decision-making.

CONCLUSION



- Python and JavaScript are popular now, but Go is the future of programming.
- Multi-model and cloud-native databases are changing data management.
- Adopting these new technologies is essential to stay competitive.
- Using advanced data processing leads to smarter decisions and innovation.

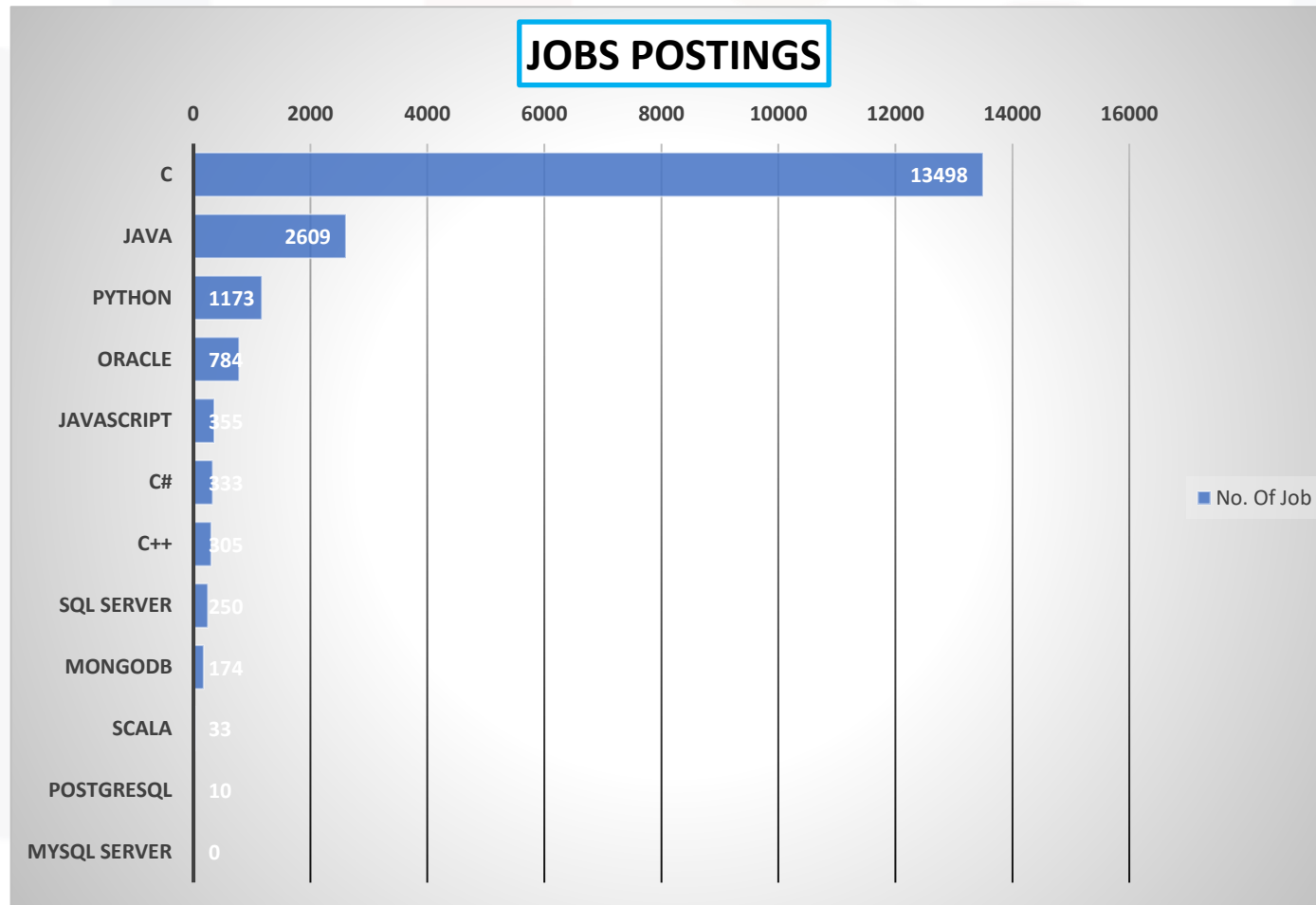
APPENDIX



- Two additional charts included in below Slides:

1. Bar Chart Of Job Postings
2. Bar Chart Of Popular Languages Salaries

JOB POSTINGS



POPULAR LANGUAGES

