Future-Proofing: Analyzing Survey Data to Identify Tomorrow's Skills

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OUTLINE

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- Methodology
- Results
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  - Dashboard
- Discussion
  - Findings & Implications
- Conclusion
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EXECUTIVE SUMMARY

- Present and Future of Tech
  - Current technologies Preferred
  - Future Technology Trend
  - Demographics
- Tech Enthusiastic per country
- Gender gap in jobs
- Age Group using the Tech most

INTRODUCTION

- Aim : Analyzing the Trends in Technologies
- Research Questions Answered :
  - Which Programming Languages are in Demand?
  - What are Popular Databases in Market?
  - Platforms and Web-Frames Preferred by Users
- Audience : Stakeholders, Technical & Human Resource Team
- End-Goal: Keep Pace with Changing technologies, Emerging Skills and Remain Competitive

METHODOLOGY

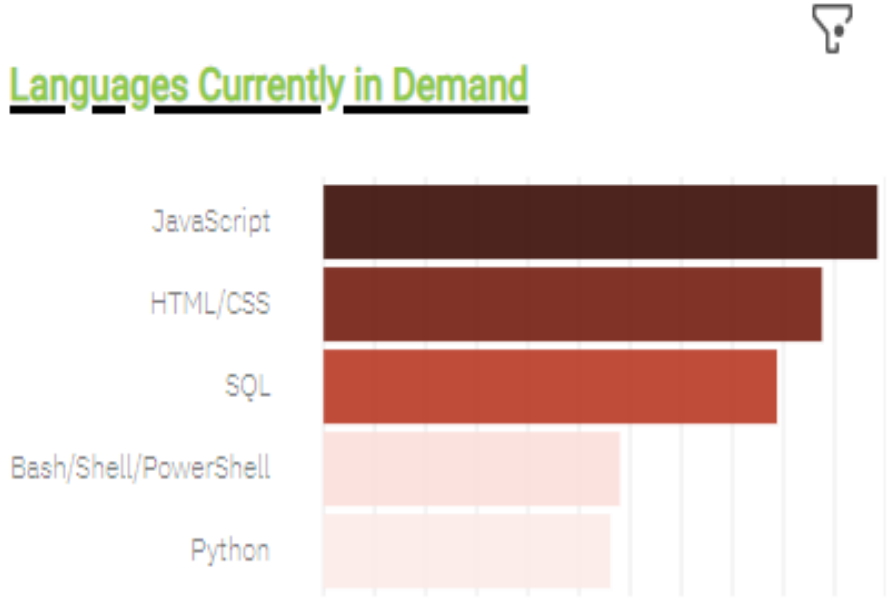
- Data Collection
  - Job Postings
  - Training Portals
  - Surveys
- Data Wrangling
- Exploratory Data Analysis
- Data Visualization
- Dashboard Creation
- Presentation of Findings

RESULTS

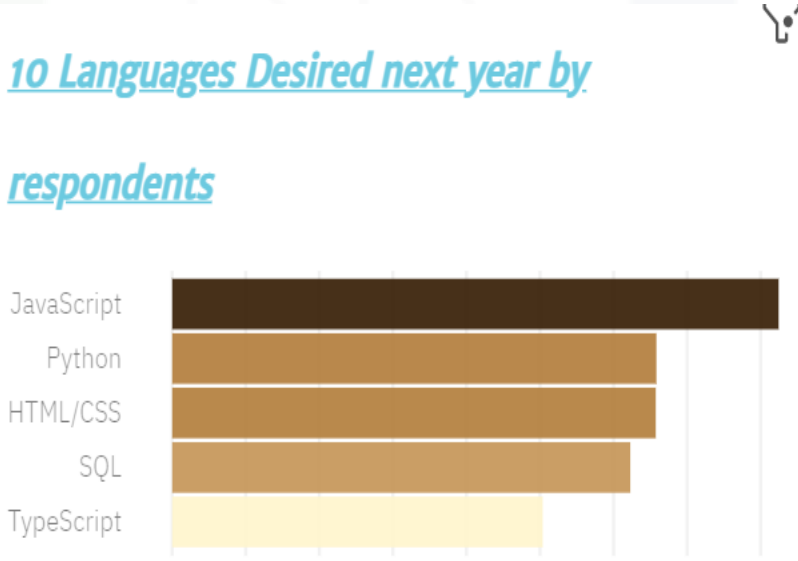
- The Survey Dataset from Stackoverflow was Analysed and Visualization created are included further to help organisation to take data-driven decision
- There are 11552 responses
- It has 85 columns or features

PROGRAMMING LANGUAGE TRENDS

Current Year



Next Year



PROGRAMMING LANGUAGE TRENDS - FINDINGS & IMPLICATIONS

Findings

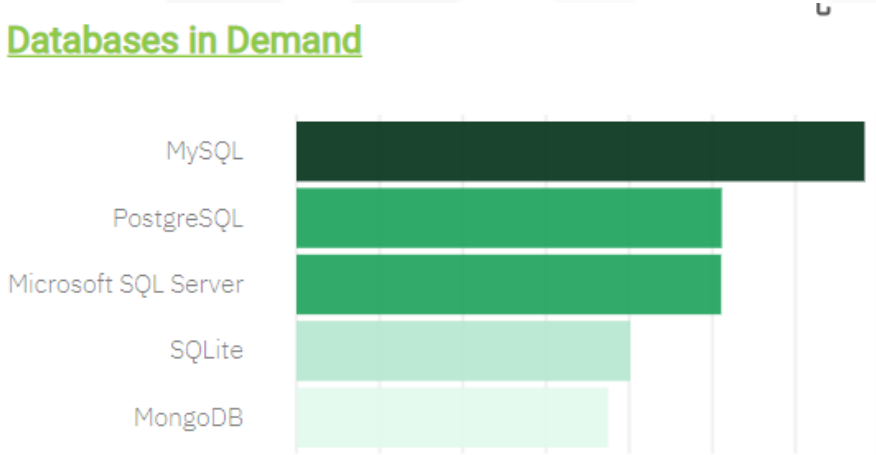
- JavaScript, HTML/CSS, SQL will sustain its positions for next few years
- Python and Typescript has high chances of becoming popular next year
- PowerShell drops from Top Charts next year

Implications

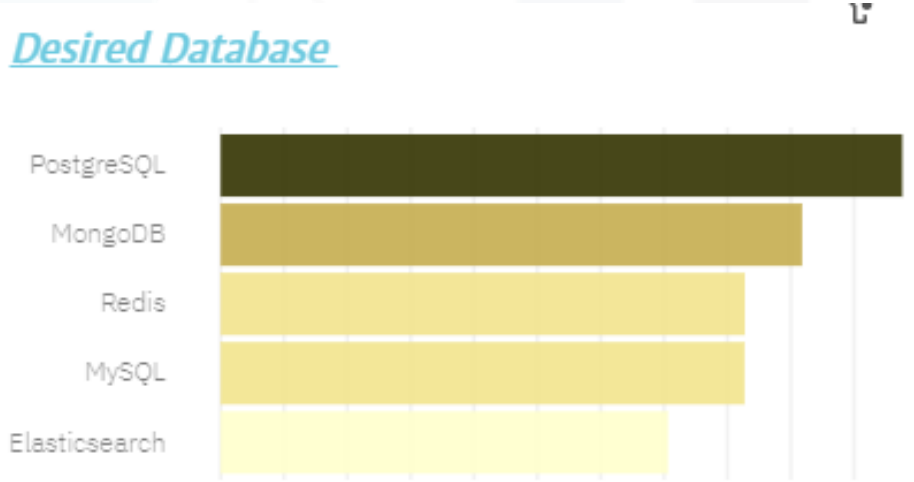
- Web development Skills are still in high demand
- Big Data technology in companies still requires SQL
- With AI and ML in rising demand, Python is best choice

DATABASE TRENDS

Current Year



Next Year



DATABASE TRENDS - FINDINGS & IMPLICATIONS

Findings

- MySQL most popular
- Microsoft SQL popularity Decreases
- MongoDB and Redis are upcoming favorites
- Emerging Database: Elasticsearch

Implications

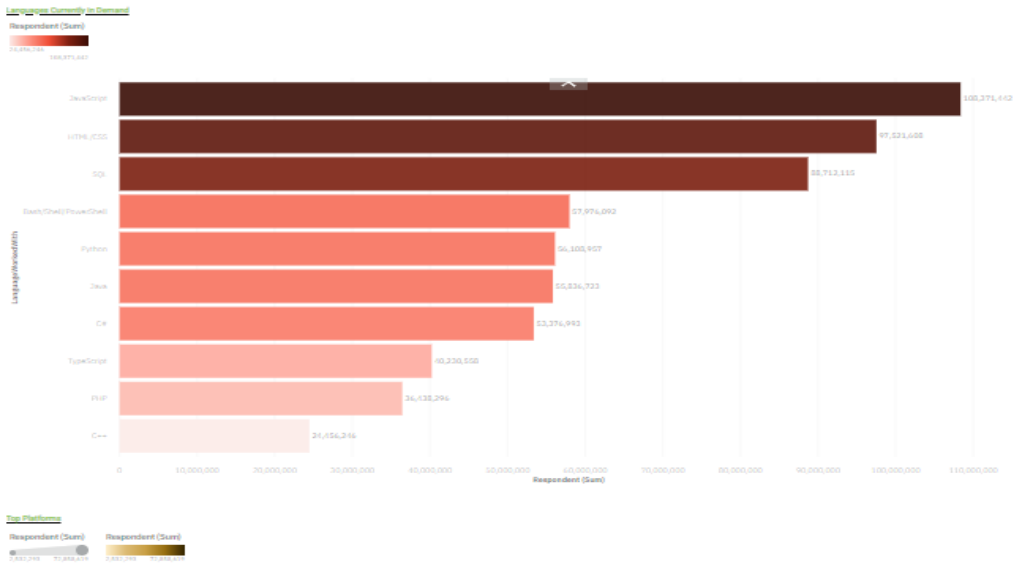
- Open-source databases like SQL, SQLite are still preferable in companies
- NoSQL databases will make an impact for storing non-relational data
- Redis supports abstract data types

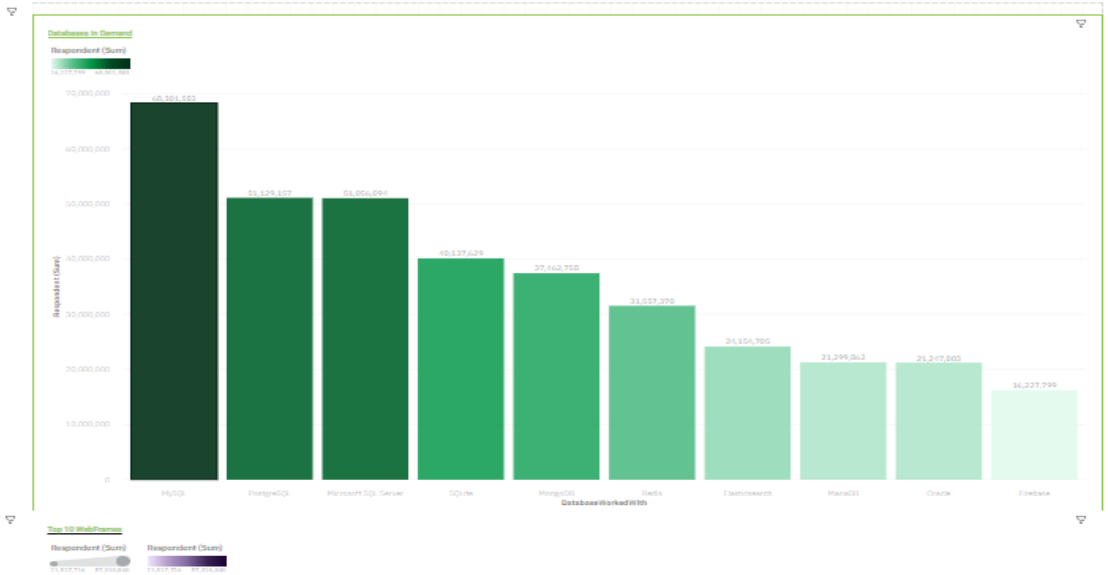
DASHBOARD

Link To Cognos Dashboard:

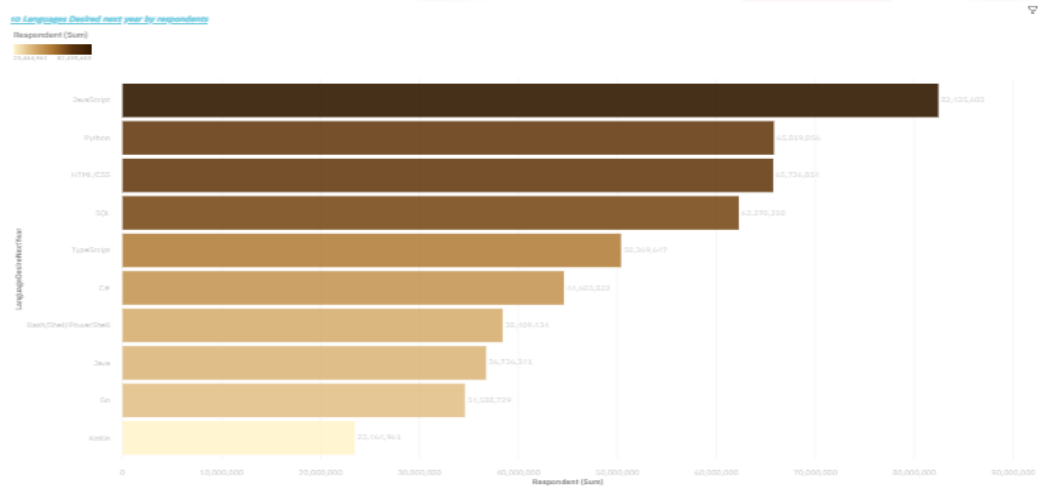
https://eu-de.dataplatform.cloud.ibm.com/dashboards/eb9cd316-8d74-40c4-aefe-2037e908416f/view/517ba63f01bd35d656c5f6e407982d537c34260eb0bbd70481847b4909357197a93845c5c82d195fdd115064a2be170cc8

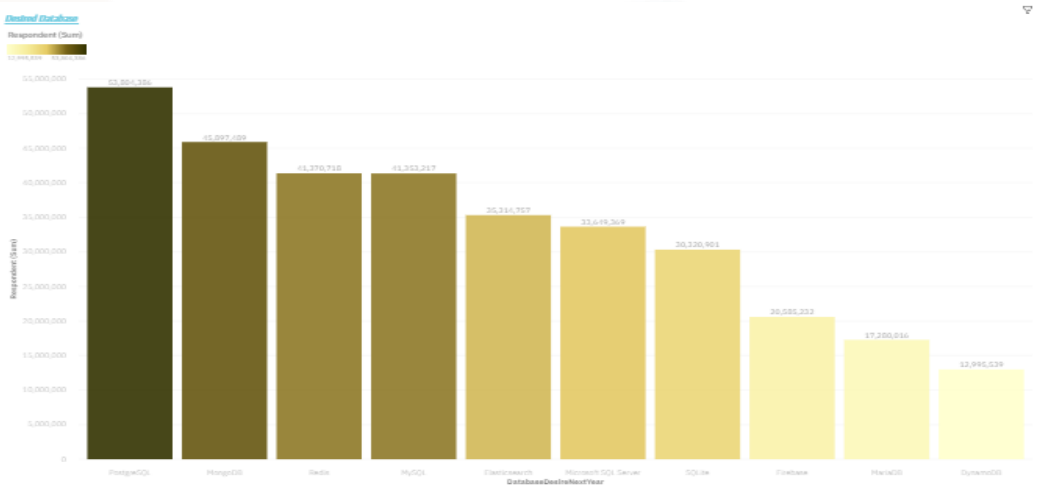
DASHBOARD TAB 1

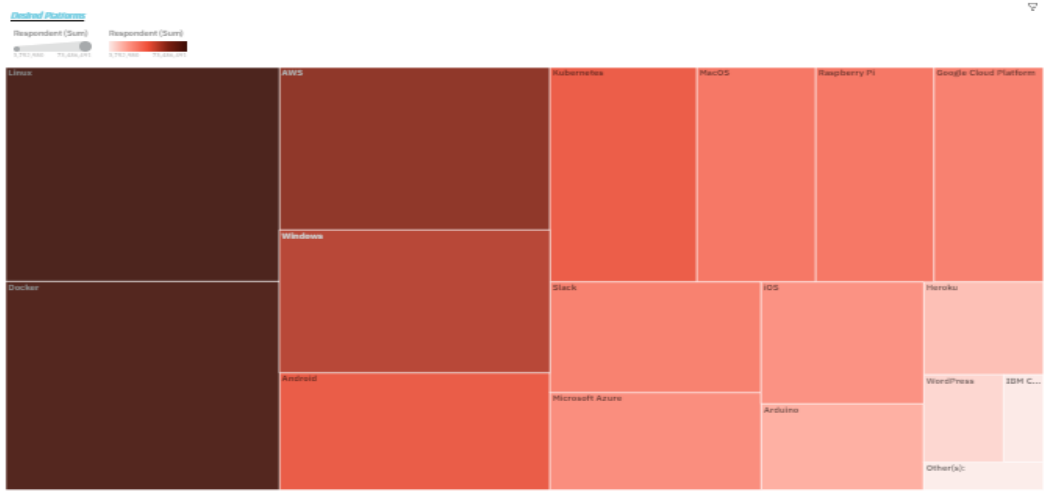


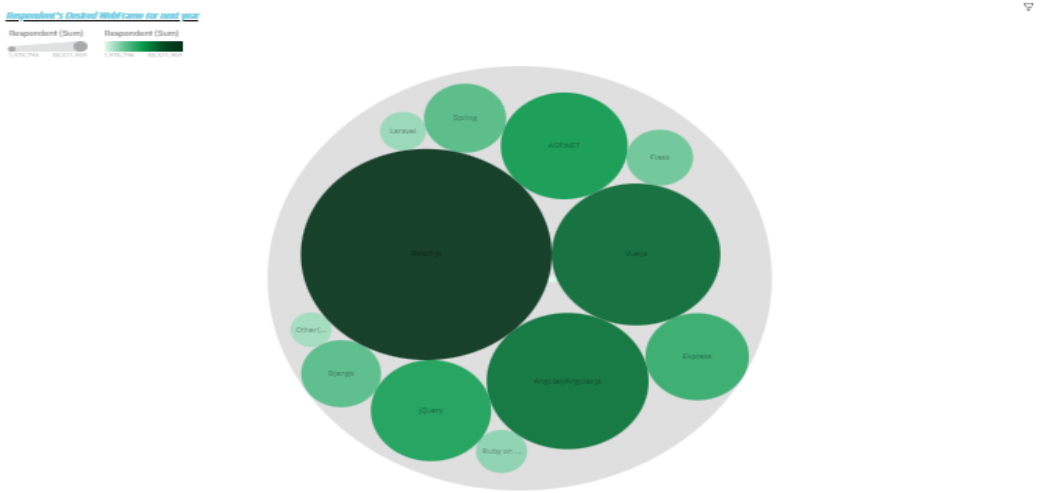


DASHBOARD TAB 2



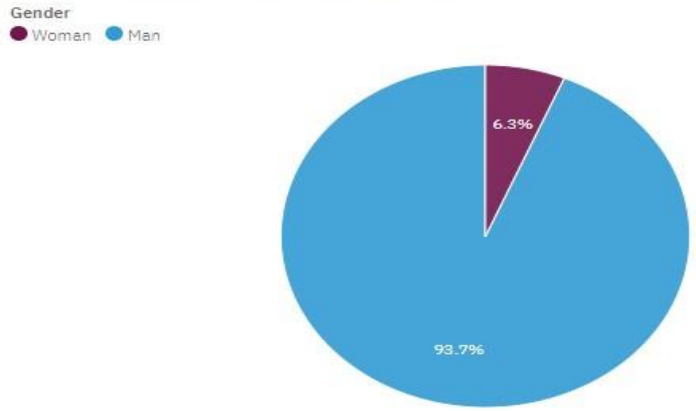




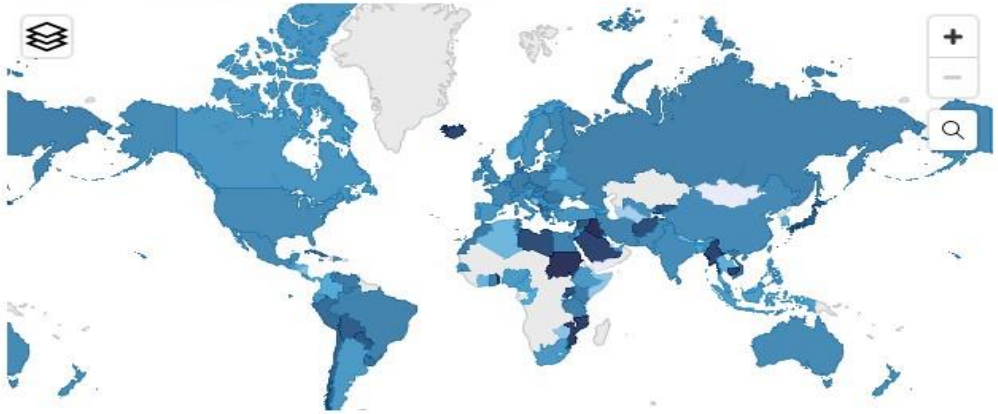


DASHBOARD TAB 3

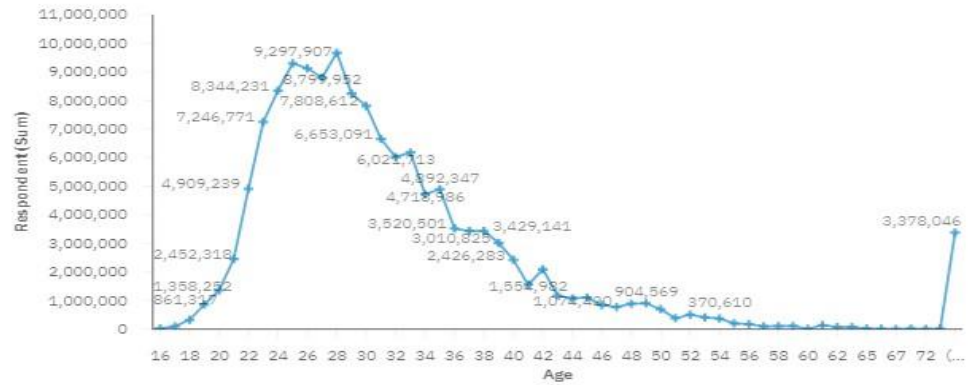
Respondent classified by Gender



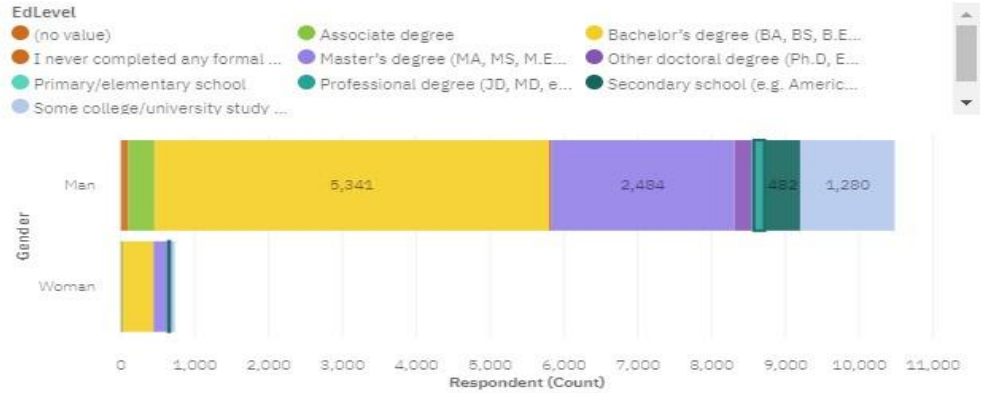
Respondent Avg(Count) for Countries



Respondent Count by Age



Respondent Count by Gender, classified by Formal Education Level



DISCUSSION

- Current and Future Technology Trends
- Training and Reskilling Workers to Keep Pace with Technology
- Measures to Increasing Female Participation in the Technology Field
- Targeting Developing Countries to Bridge the gap
- Eliminating Employment Discrimination Based on Age and Education

OVERALL FINDINGS & IMPLICATIONS

Findings

- Rapidly Evolving Technology Landscape
- Technology Development Concentrated in Few Developed Countries such as USA
- Gender Disparities in Technology Employment
- Growing Popularity of Platforms like Docker, Slack and AWS

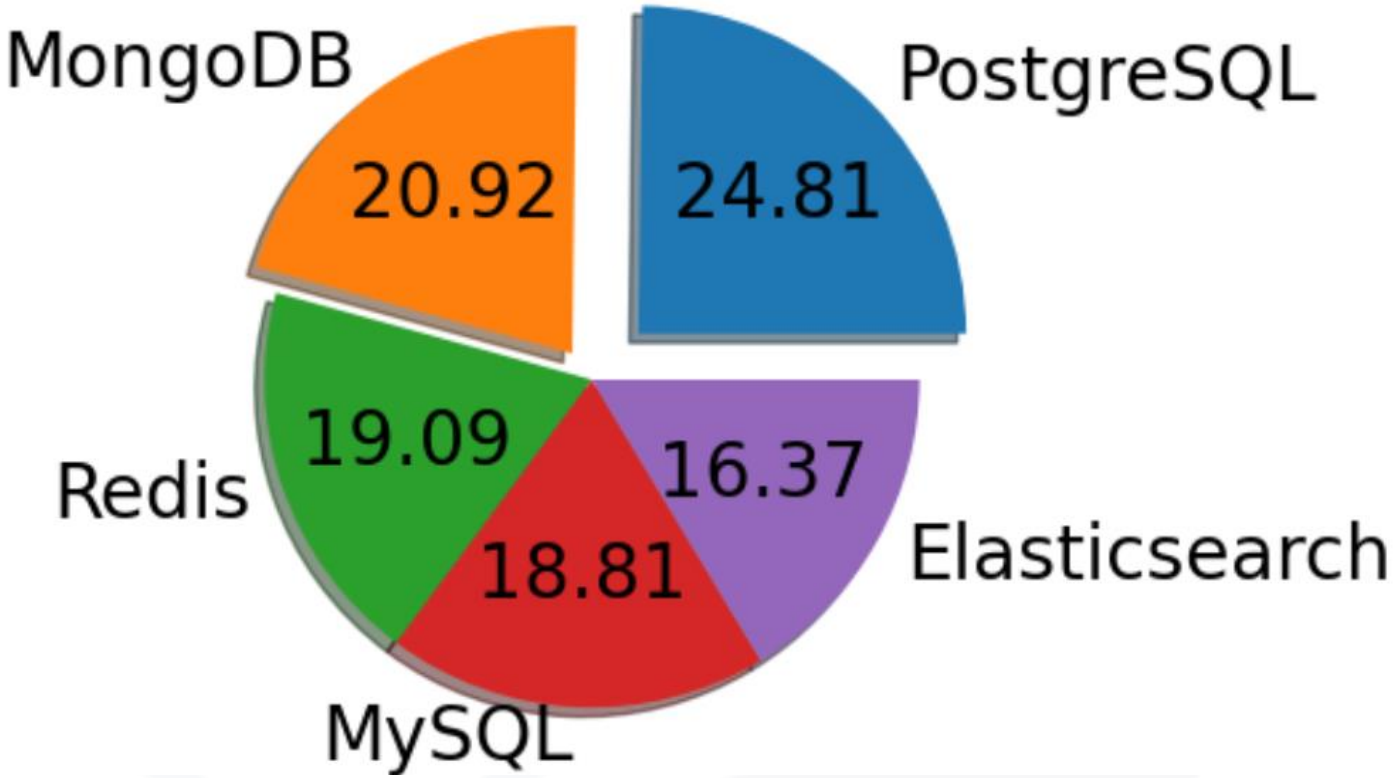
Implications

- Necessity for Companies to Adapt to Rapid Changes and Remain Flexible
- Urgent Need to Promote Technology Spread in Less Developed Countries
- Anticipated Shift Towards Faster App Deployments and Widespread Adoption of Cloud Services in the Future

CONCLUSION

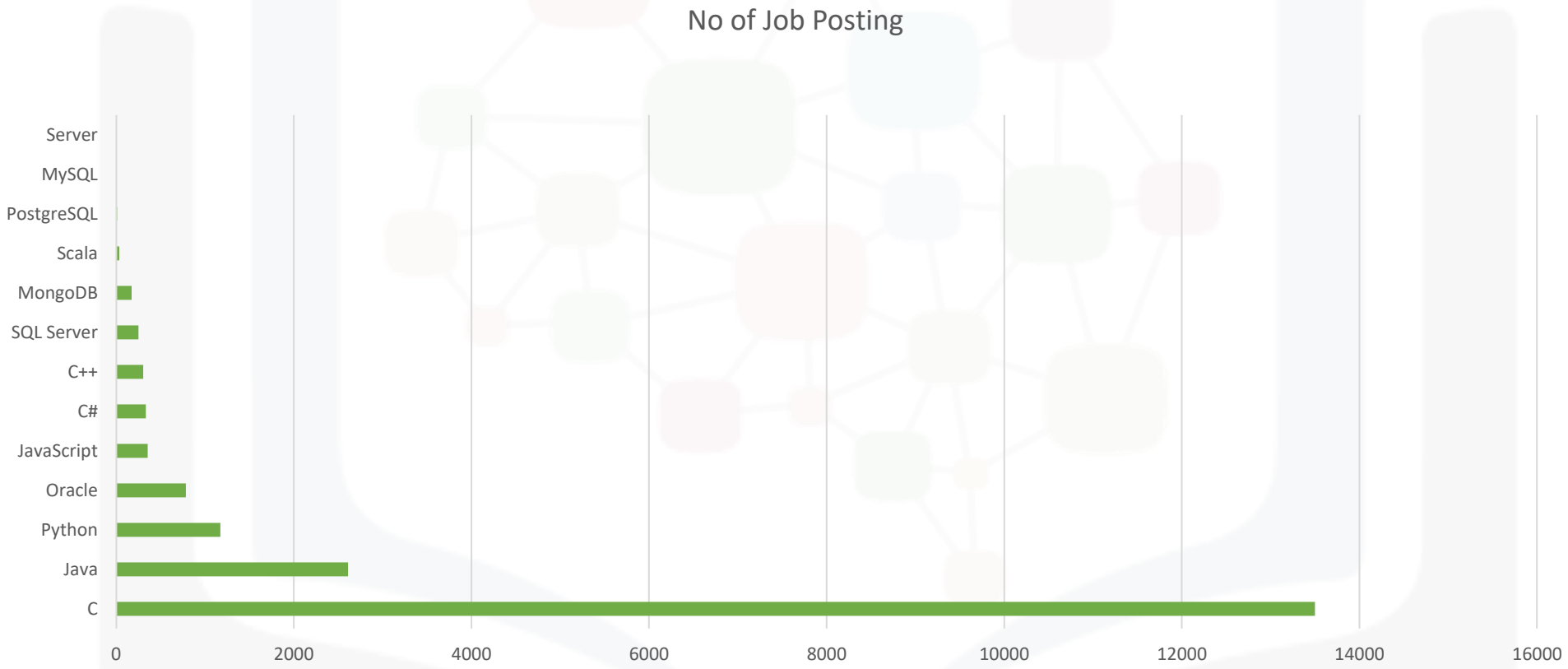
- ✓Overview of Technology Trends for the Current and Upcoming Year
- ✓Summary of Popular Programming Languages, Databases, and Platforms
- ✓Analysis of Technology Industry Demographics
- ✓Proposed Actions for Advancing Technology Development and Inclusion
- ✓Future Plan to use Cloud Platform and Machine Learning

APPENDIX



Databases Desired next year

JOB POSTINGS



POPULAR LANGUAGES