Stack Overflow Survey Results

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OUTLINE

- **Executive Summary**

- **Introduction**

- **Methodology**

- **Results**
  - Visualization – Charts
  - Dashboard

- **Discussion**
  - Findings & Implications
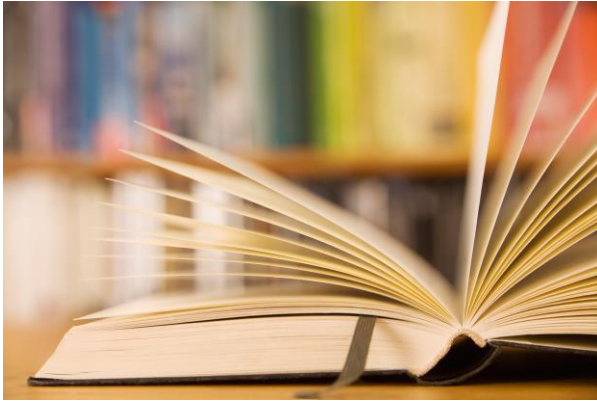
- **Conclusion**

- **Appendix**

EXECUTIVE SUMMARY

- JavaScript, HTML/CSS, and Python are the top 3 programming languages

- PostgreSQL emerges as the dominant database
  - signaling a shift towards open-source, scalable database solutions.

- React and Node.js are the two most popular web development frameworks
  - Next.js is gaining significant traction

- AWS maintains its dominance in cloud infrastructure and services

- Python and Swift lead in average annual salaries

INTRODUCTION

- Purpose
  - Analyze findings of Stack Overflow survey

- Target audience
  - Job seekers and hiring managers
  - Technology professionals

- Value
  - Insights into current/future status of tech
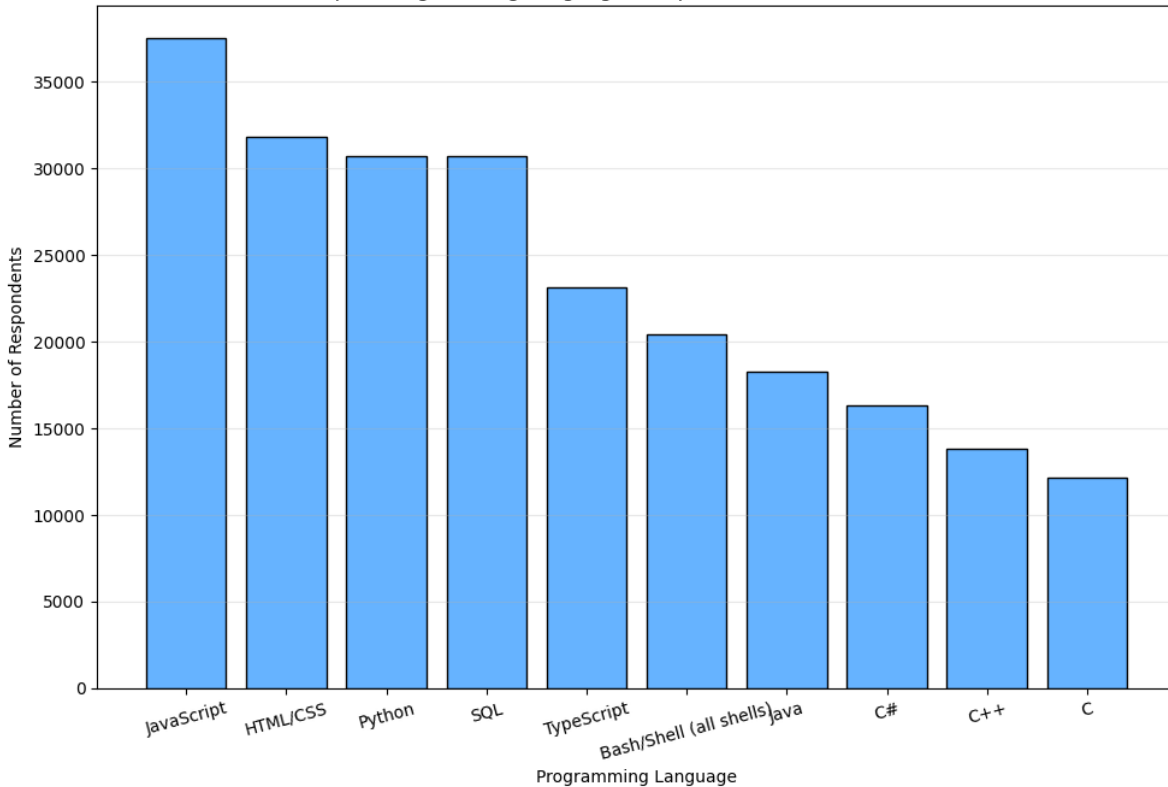
METHODOLOGY

- Data source
  - Stack Overflow Survey 2024

- Data wrangling
  - Removed duplicates
  - Dealt with incomplete data entries
  - Removed outliers

- Exploratory data analysis
  - Gained insight into the data by generating different types of plots

- Dashboards
  - Dashboard I: current technology usage
  - Dashboard II: future technology trends
  - Dashboard III: demographics
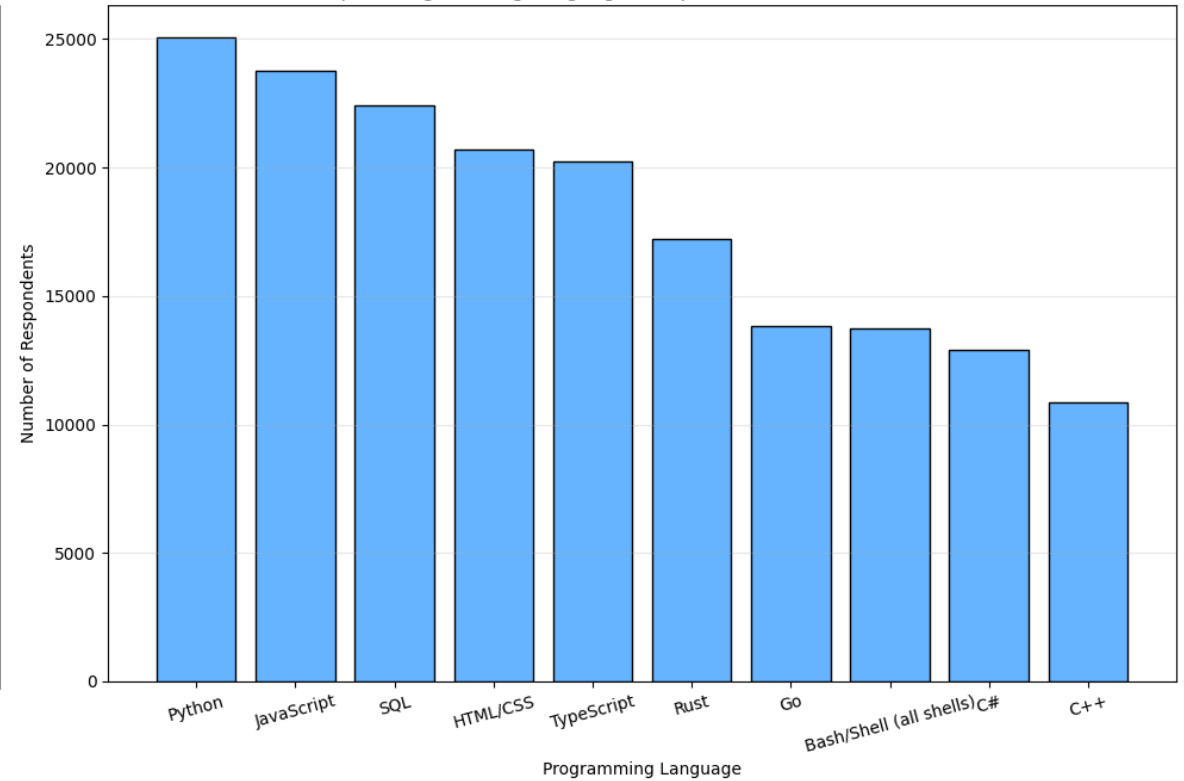
PROGRAMMING LANGUAGE TRENDS

Current Year

Top 10 Programming Languages Respondents have Worked With

Next Year

Top 10 Programming Languages Respondents Want to Work With

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PROGRAMMING LANGUAGE TRENDS - FINDINGS & IMPLICATIONS

Findings

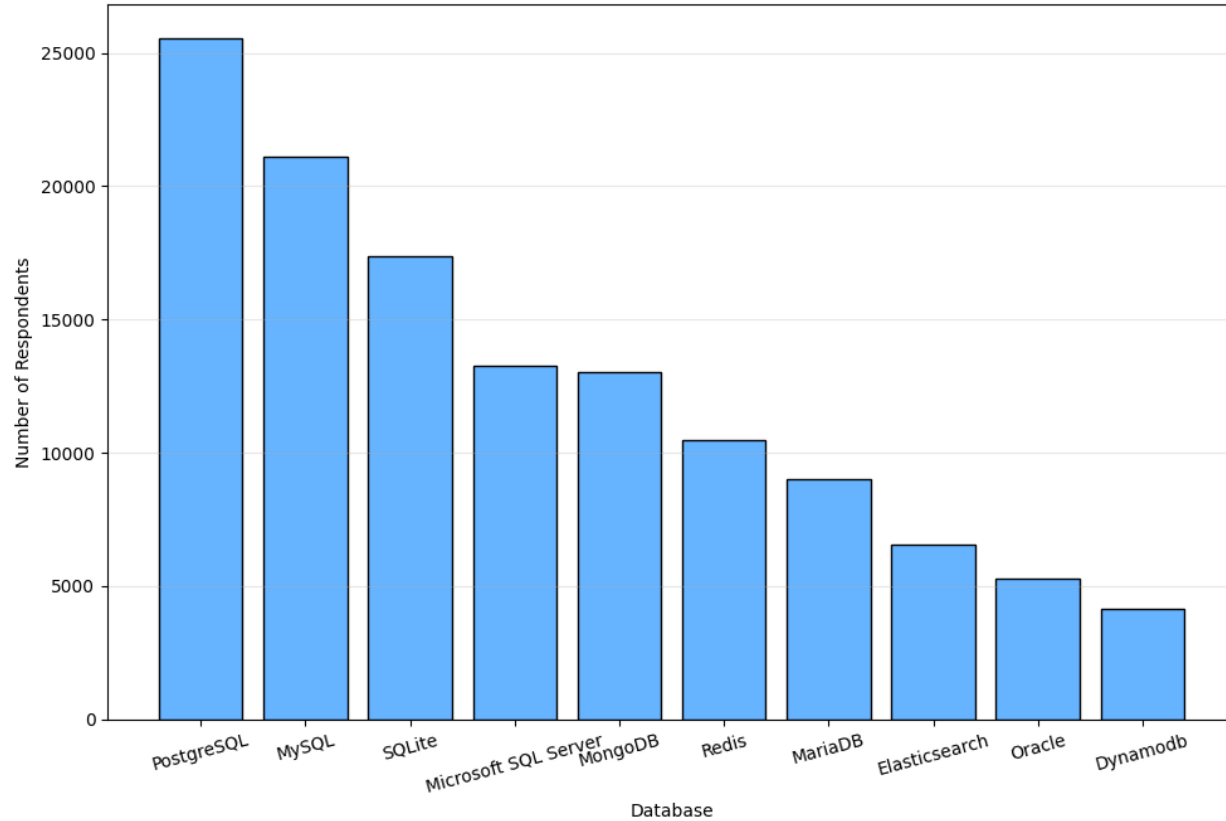- JavaScript is the most used language

- Python is experiencing rapid growth

Implications

- Need to invest in JavaScript-based technologies
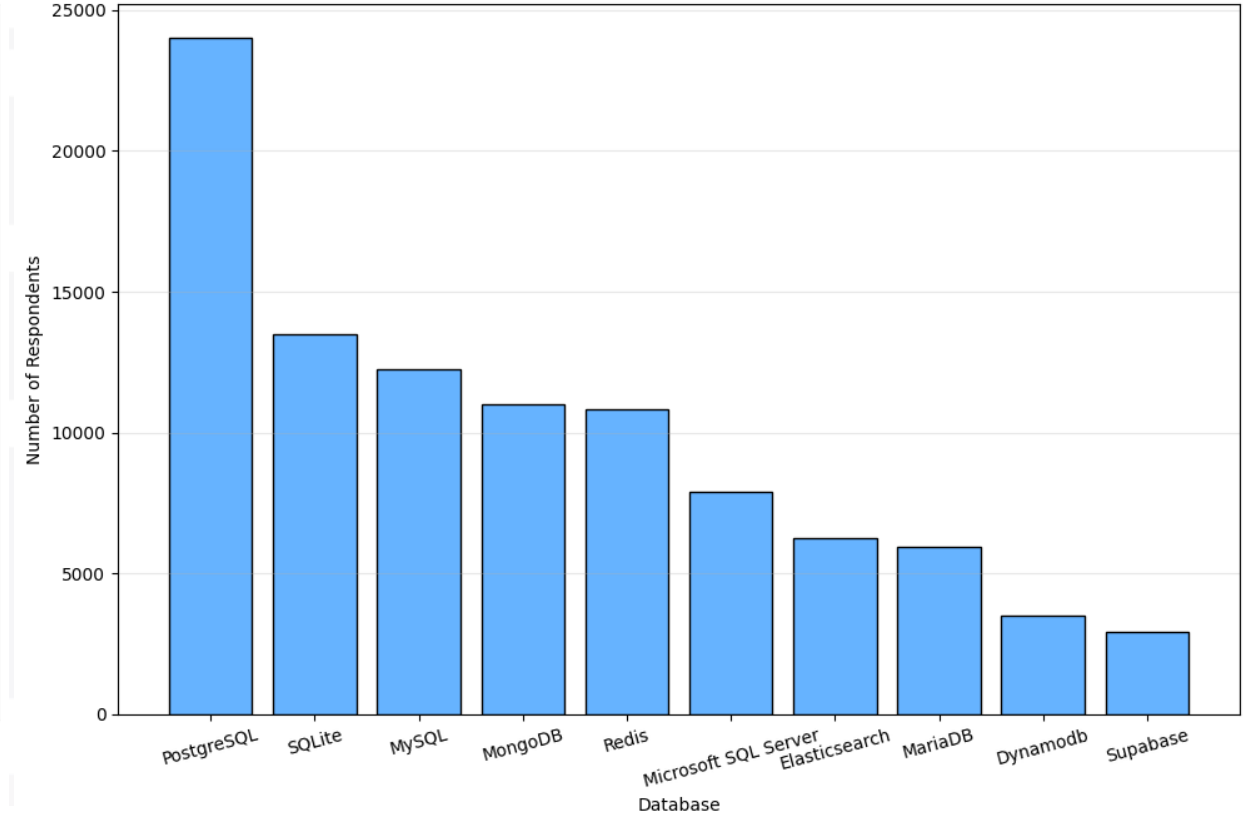
- The growth of AI is fueling that of Python

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DATABASE TRENDS

Current Year

Top 10 Databases Respondents have Worked With

Next Year

Top 10 Databases Respondents Want to Work With

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DATABASE TRENDS - FINDINGS & IMPLICATIONS

Findings

- PostgreSQL is a clear winner
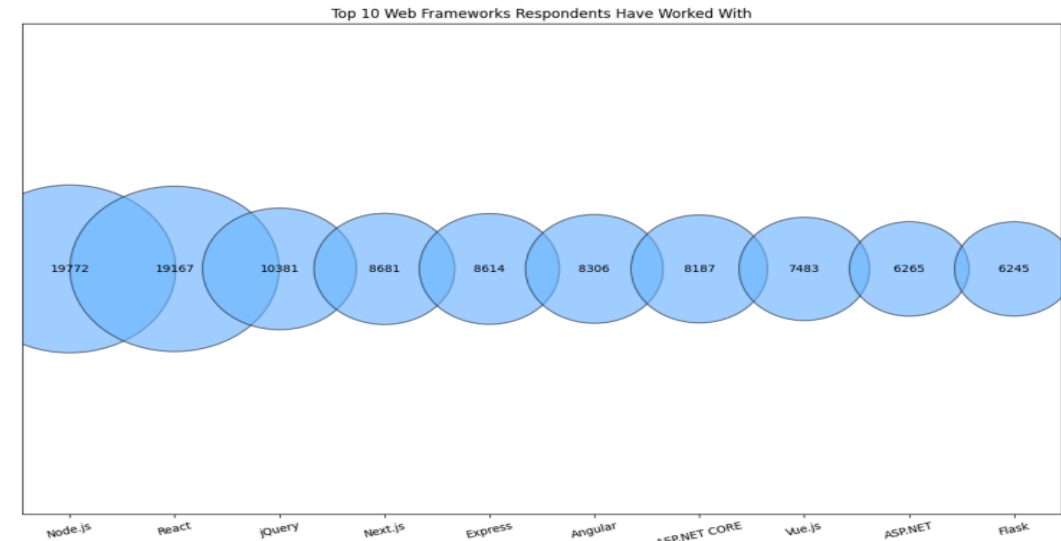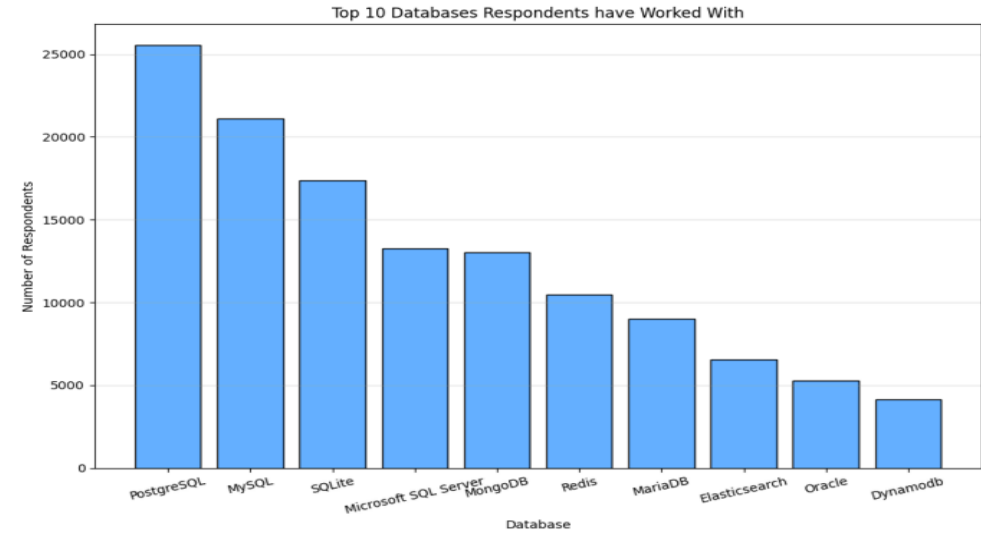
- Popularity of no-SQL is on the rise

Implications

- Shift towards open-source databases
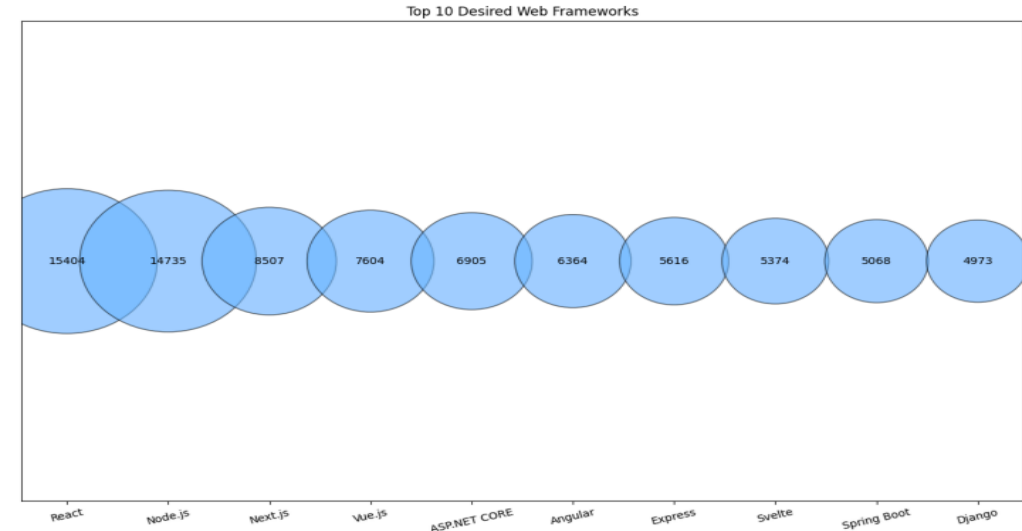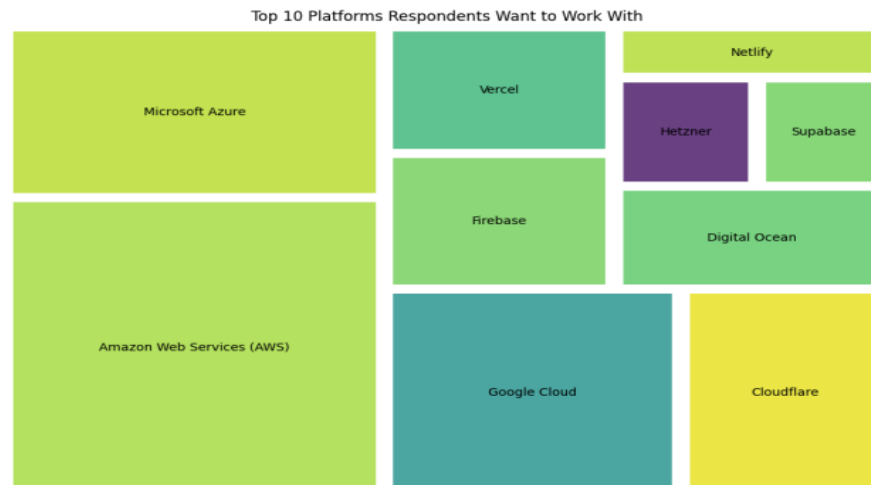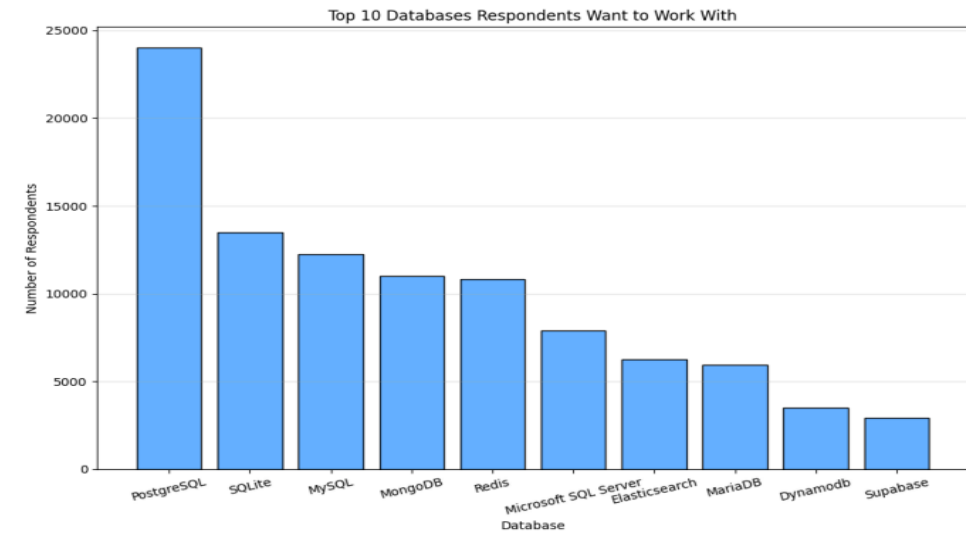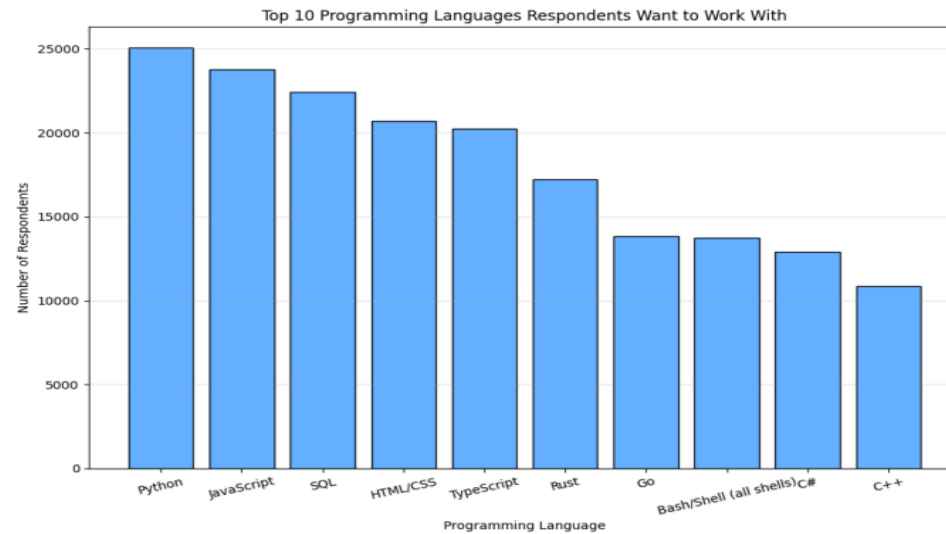
- No-SQL skills are a necessity

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DASHBOARD TABLE 1

Current Technology Usage

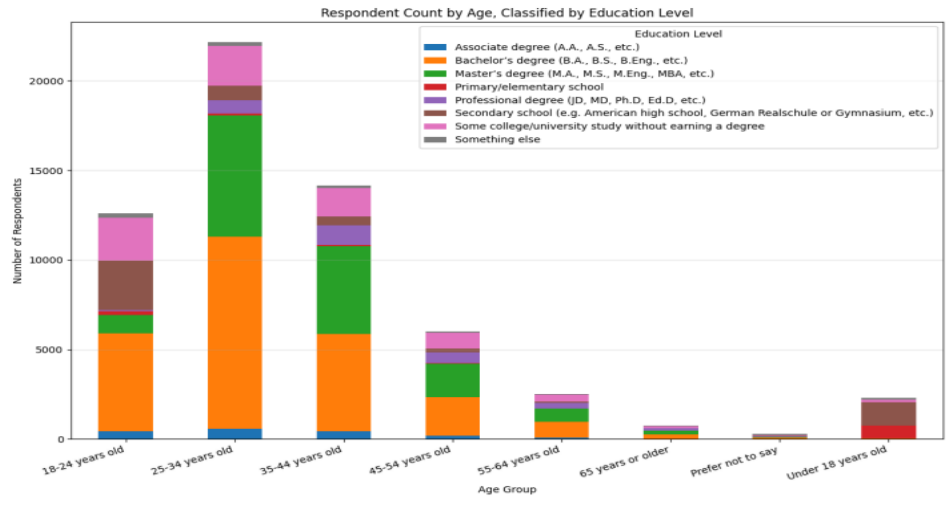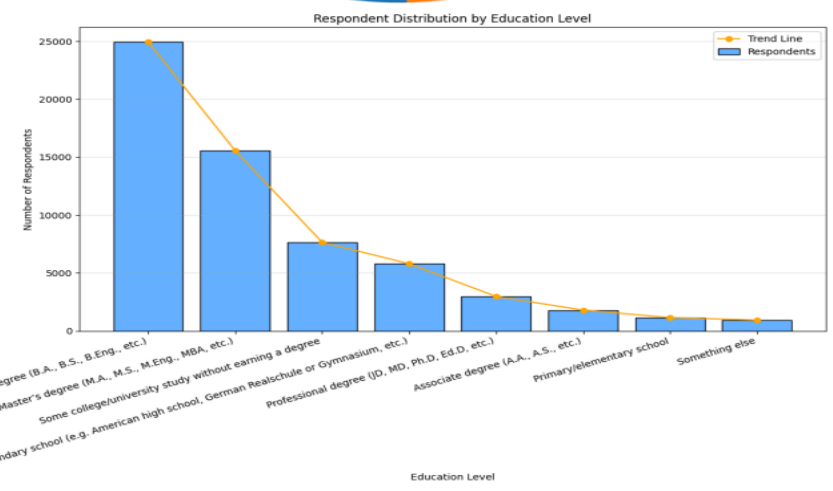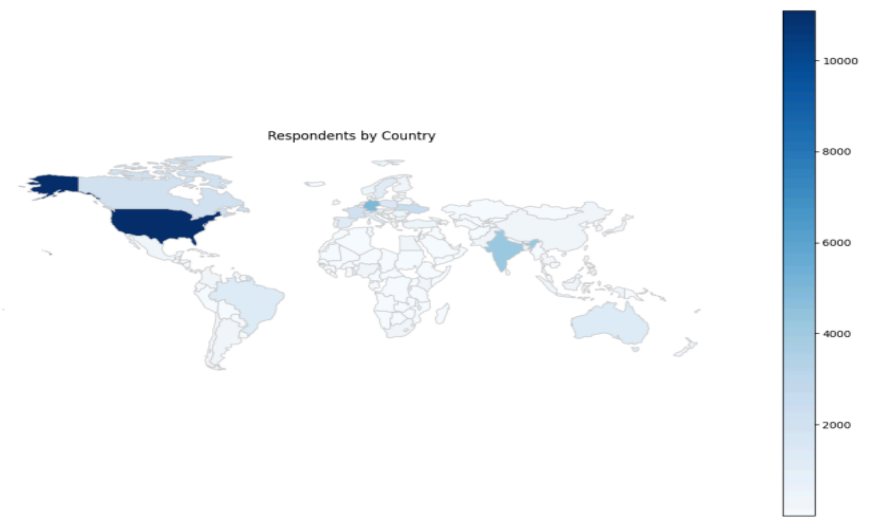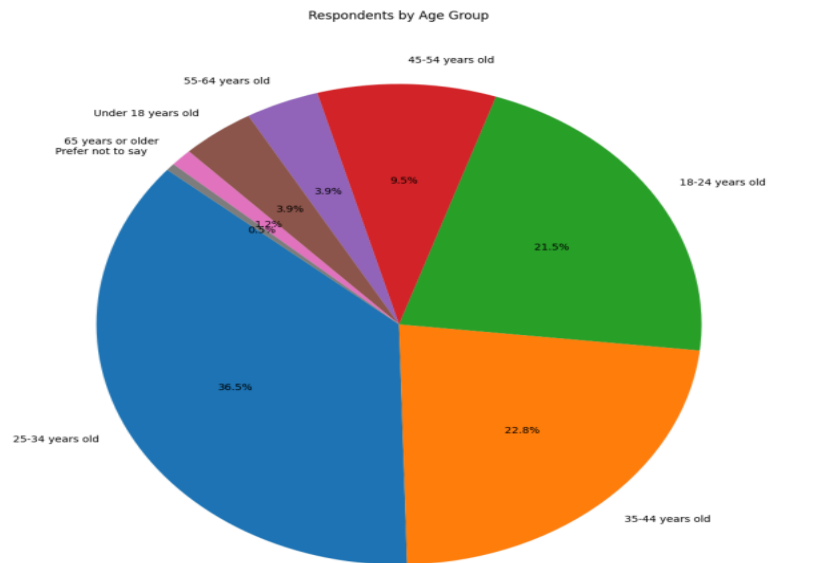# DASHBOARD TABLE 2

Future Technology Trend

DASHBOARD TABLE 3

DISCUSSION

- The majority of respondents
  - Aged between 25 and 44
  - Based in the United States of America
  - Hold a bachelors degree

- Relational databases are more popular
  - than non-relational ones

- The popularity of Java is declining

- The popularity of Rust is significantly growing

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OVERALL FINDINGS & IMPLICATIONS

Findings

- Continued dominance of
  - JavaScript, Python, and HTML/CSS
- PostgreSQL leads the database category
- AWS maintains a stronghold in the market

Implications

- Knowledge of PostgreSQL and AWS
  - Essential for backend development
- JavaScript for web development
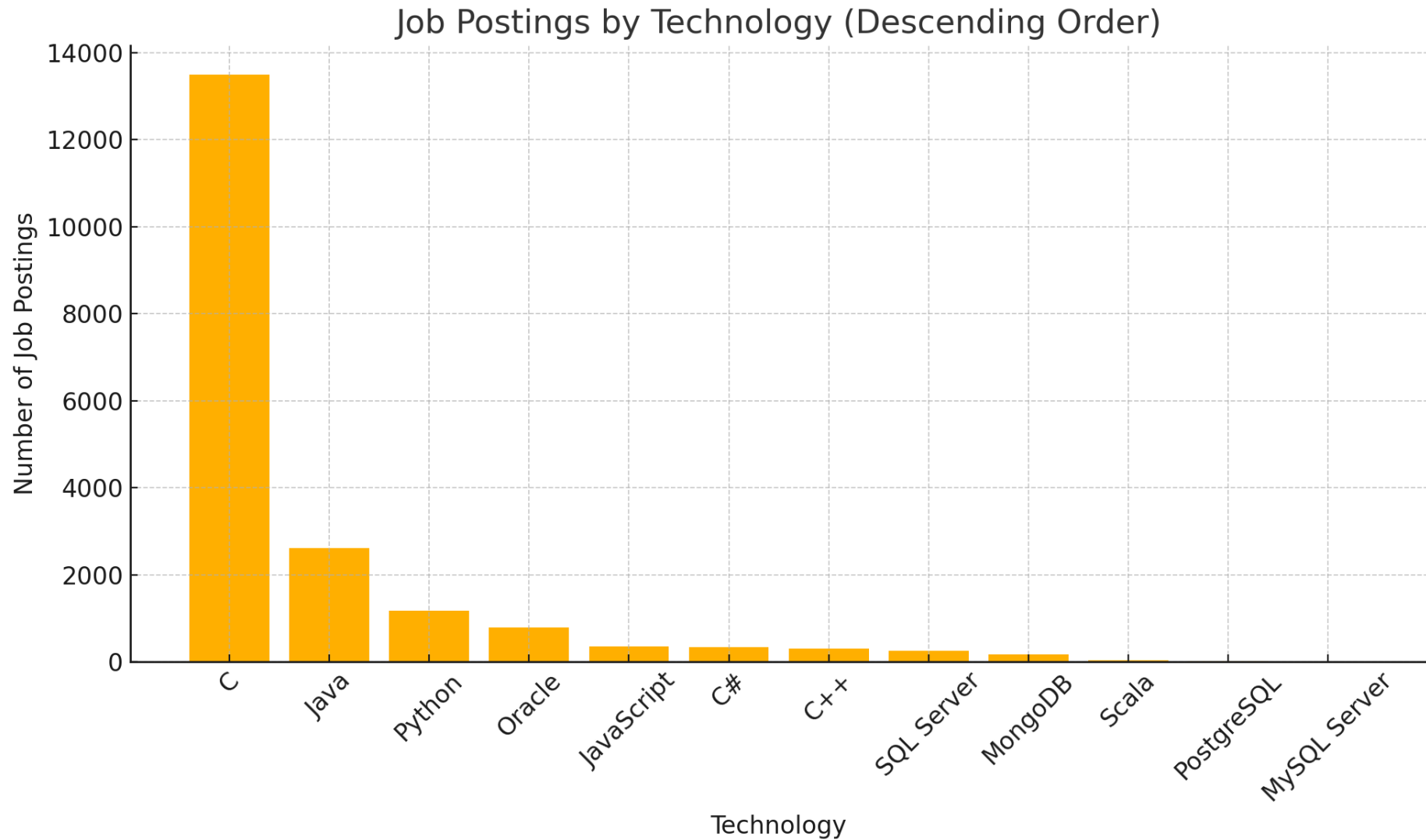- Python for AI/data science

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CONCLUSION

- Strong interest in JavaScript and Python

- PostgreSQL and AWS for backend development

- Growth in no-SQL technologies like MongoDB

- Developers must align skills with industry needs
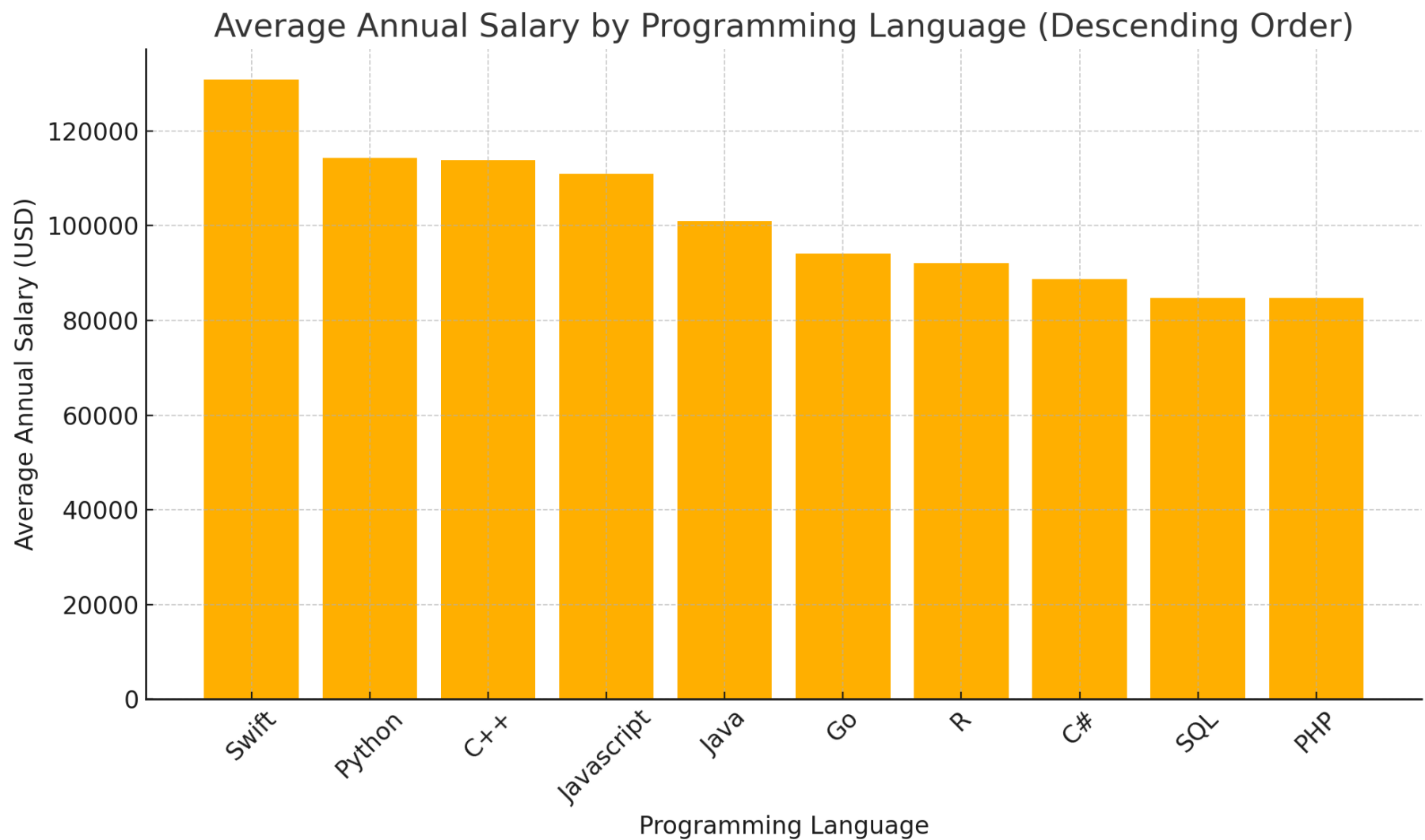 - To secure future roles

APPENDIX

JOB POSTINGS

Job Postings by Technology (Descending Order)

POPULAR LANGUAGES

Average Annual Salary by Programming Language (Descending Order)

REFERENCE

The data set used in this assignment is the Stack Overflow Developer Survey data is available at:

https://cf-courses-data.s3.us.cloud-object-storage.appdomain.cloud/HLOosvsPglwt5dgOOh1RSg/survey-data-updated.csv

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