



Current technology trends

Radhouen Rahmouni

October 2024

OUTLINE



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

EXECUTIVE SUMMARY



- Data collection and objective
- Methodology
 - Data sources
 - Data analysis
 - Data visualization
- Results of findings
- Discussions
- Conclusion

INTRODUCTION



- We seek to shed light into current and future technology trends in this presentation using the Stack Overflow's annual Developer Survey.
- This survey provides insights into global software development trends, tools, and developer experiences.
- Trends to predict where the developers are going.
- Characterization of developers around the globe.
- Nearly 90,000 developers.
- Covers a wide range of topics such as demographics, technology preferences, and work environment.

METHODOLOGY



- Collect survey data & explore its content
 - Web Scraping.
 - APIs.
 - Request library.
- Data Wrangling
- Exploratory data analysis
 - Analyzing data distribution..
 - Handling outliers..
 - Correlations.
- Data Visualization
 - Highlight distribution of data, relationships, the composition and comparison of data.
- Dashboards

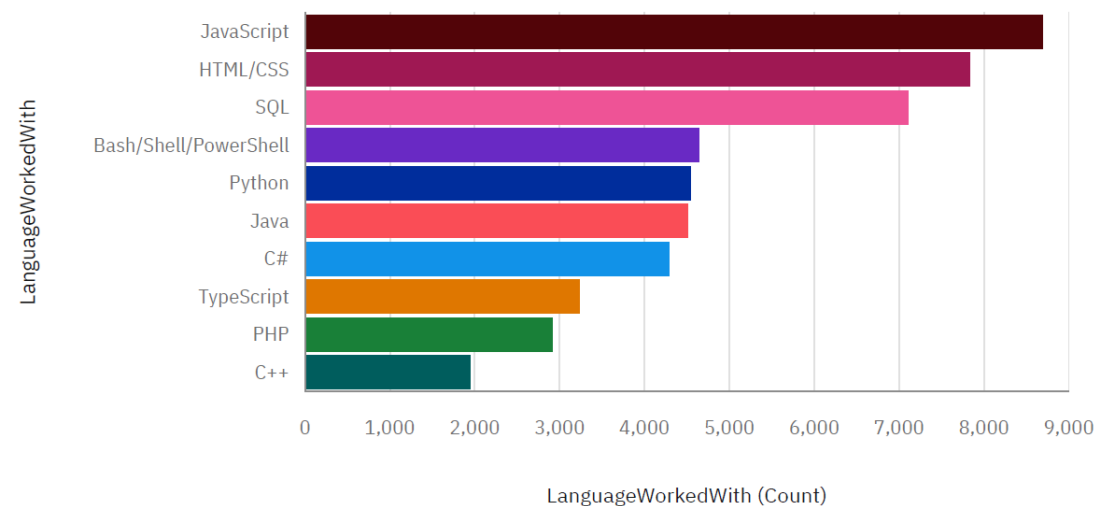
RESULTS



PROGRAMMING LANGUAGE TRENDS

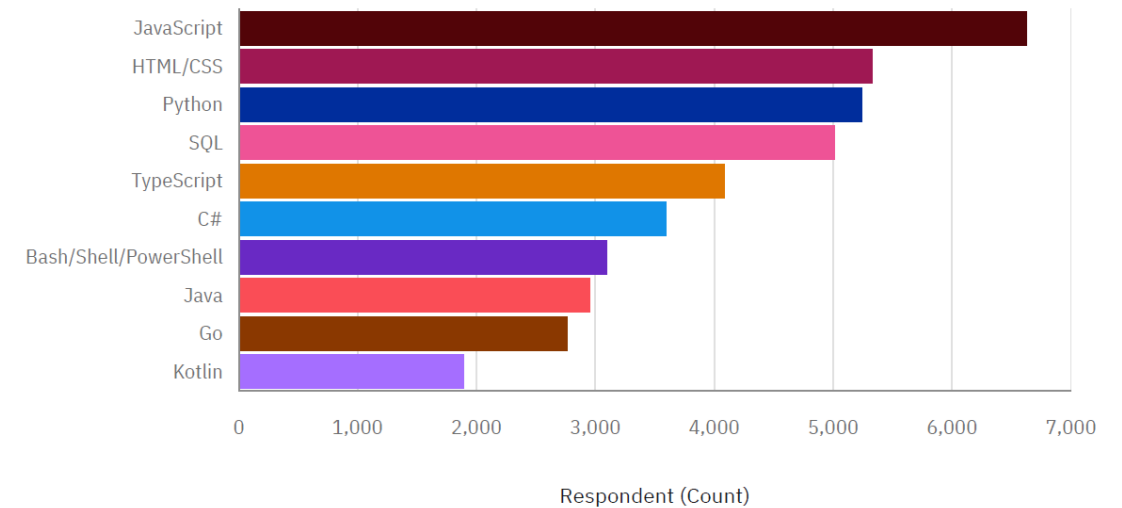
Current Year

Top 10 Languages worked with



Next Year

Top 10 Desired Languages next year



PROGRAMMING LANGUAGE TRENDS - FINDINGS & IMPLICATIONS

Findings

- JavaScript and HTML/CSS are the leading languages among the respondents
- JavaScript and HTML/CSS are projected to remain the top interest of respondents
- Python is on the rise and so is TypeScript
- PHP is in decline however

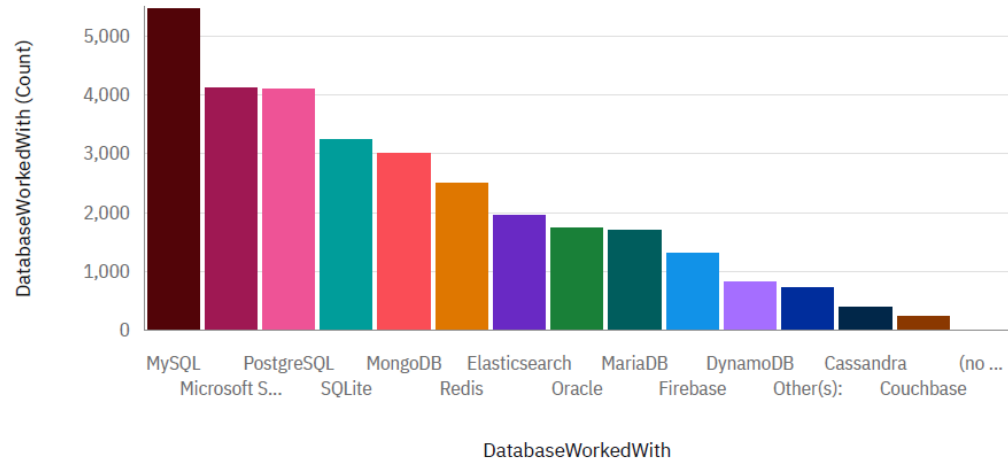
Implications

- The high usage of JavaScript and HTML/CSS suggests that web development is the most important for respondent.
- Web development will remain the most important
- Mastery of SQL remains crucial due to its widespread application in database management

DATABASE TRENDS

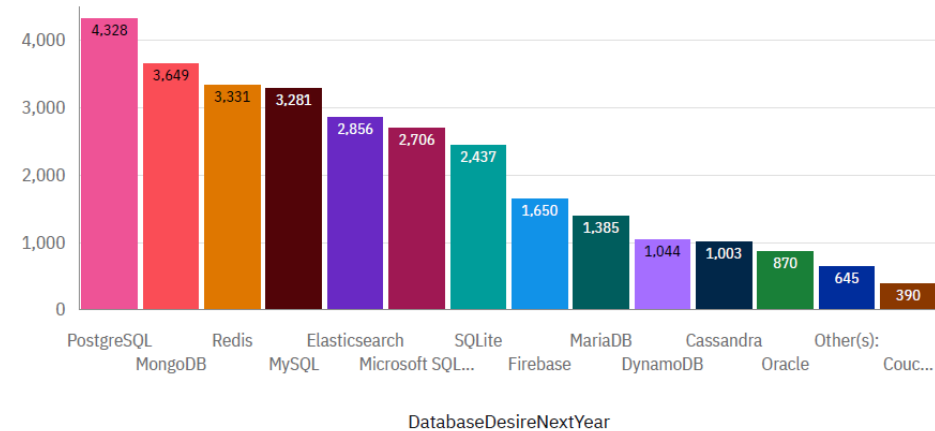
Current Year

Top 10 Databases Worked With



Next Year

Top 10 Desired Databases Next Year



DATABASE TRENDS - FINDINGS & IMPLICATIONS

Findings

- PostgreSQL is on the rise: it's the most desired database for next year
- Shift toward NoSQL: MongoDB and Redis are gaining traction, reflecting the need for scalable, real-time, and unstructured data handling.
- MySQL and Microsoft SQL Server are declining in demand: Despite their heavy usage now, interest in these traditional databases is fading as developers turn to modern, open-source alternatives.
- Cloud-native solutions: DynamoDB and Firebase are growing in demand, indicating the industry's shift toward serverless and cloud-native infrastructures.

Implications

- Developers should focus on learning PostgreSQL and NoSQL databases like MongoDB and Redis to align with future industry demand.
- Employers may need to adopt more flexible, open-source solutions such as PostgreSQL and consider transitioning from legacy systems like Microsoft SQL Server and Oracle.
- Cloud-native databases like DynamoDB and Firebase are set to rise, reflecting a broader shift toward serverless architectures.

DASHBOARD



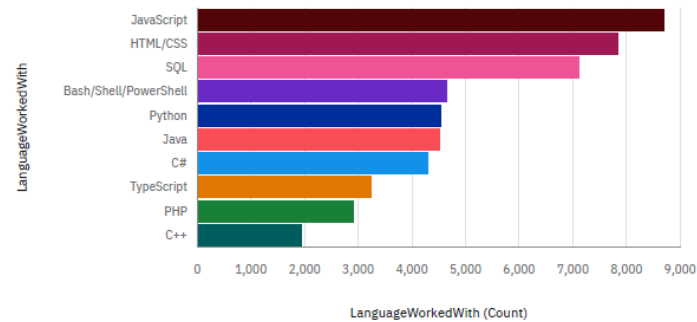
<https://github.com/radrhm/IBM-Capstone/blob/7dbce96a5f346bcacbbc347a9e71b1ba641451c1/Dashboard.pdf>

DASHBOARD TAB 1

10/16/24, 11:18 AM

Current Technology Usage

Top 10 Languages worked with

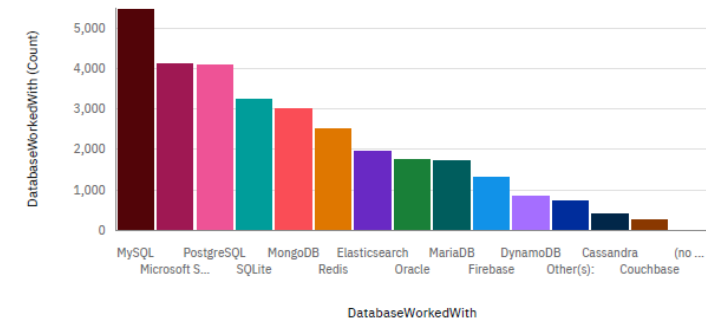


Platform Worked With

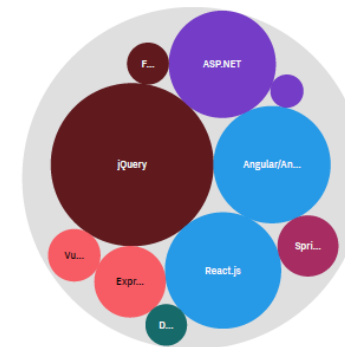


Current technology Usage

Top 10 Databases Worked With



WebFrame Worked With

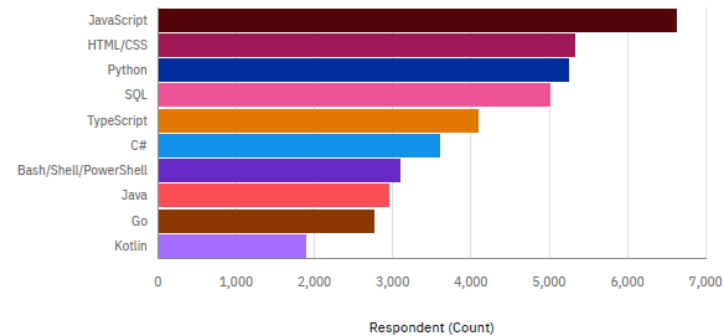


DASHBOARD TAB 2

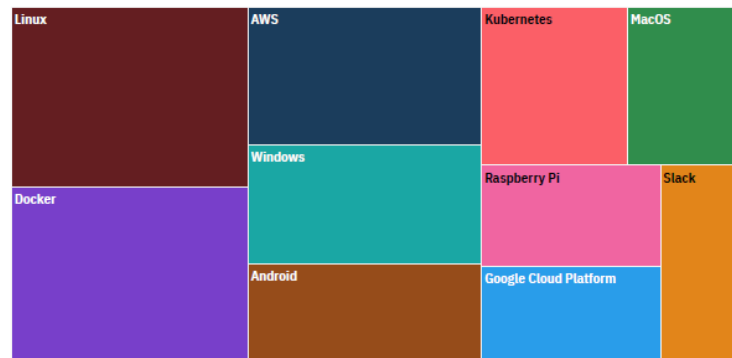
10/16/24, 11:18 AM

Future Technology Trend

Top 10 Desired Languages next year

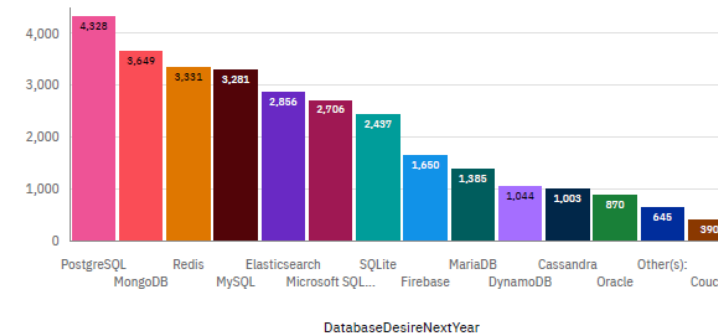


Top 10 Desired Platform next Year

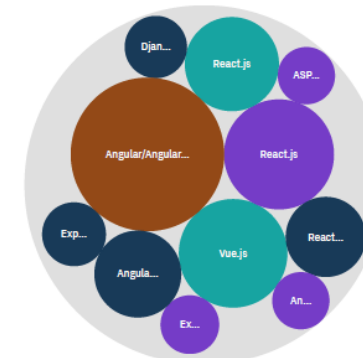


Current technology Usage

Top 10 Desired Databases Next Year



Top 10 Desired Webframe Next Year

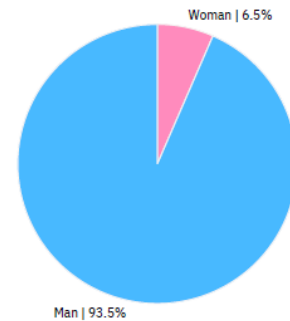


DASHBOARD TAB 3

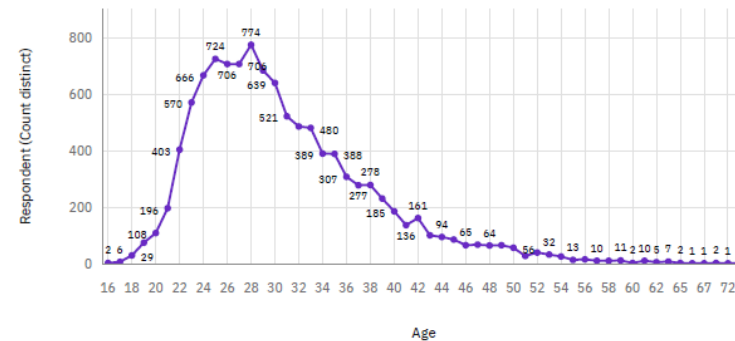
10/16/24, 11:18 AM

Demographics

Respondents by Gender

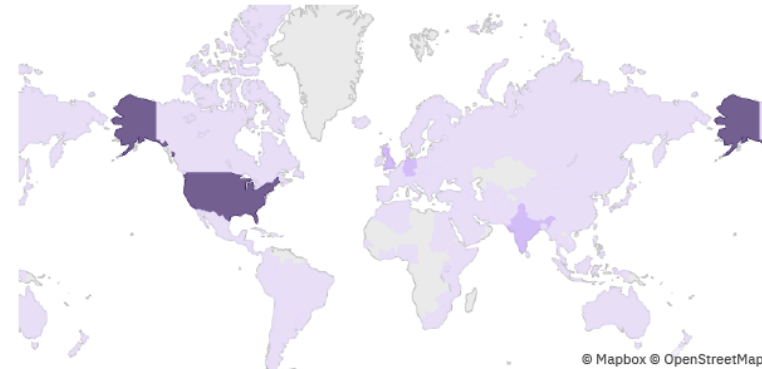


Respondent by Age

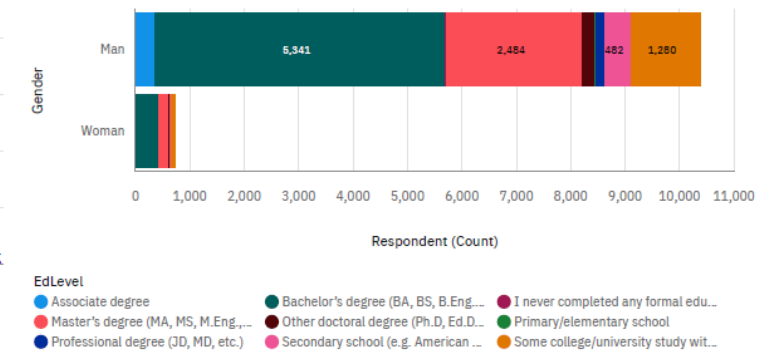


Current technology Usage

Respondent for Country regions



Respondent by Gender classified by Education Level



DISCUSSION



OVERALL FINDINGS & IMPLICATIONS

Findings

- JavaScript remains and projected to remain dominant. Python is increasingly desired.
- SQL databases are dominant yet there is a shift toward NoSQL databases
- Most respondent are male, young, highly educated and located in the US and other advanced countries

Implications

- Focus on learning PostgreSQL, NoSQL databases, Python, and modern languages like Go.
- Cloud-native architectures are becoming critical—Firebase and DynamoDB demand is growing.

CONCLUSION



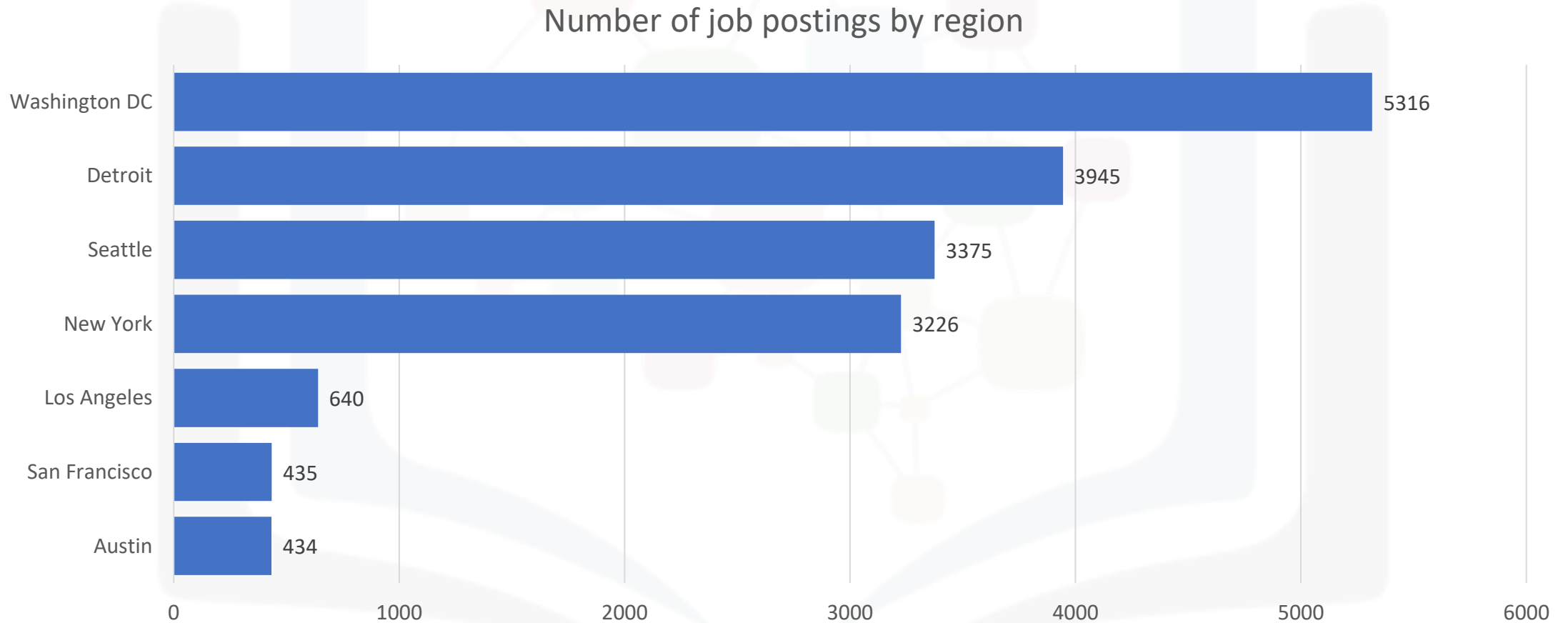
- Stable Demand: JavaScript and SQL remain key technologies.
- New Trends: Growing interest in Go, Kotlin, PostgreSQL, and MongoDB.
- Platform Shift: Increased focus on Linux, Docker, and AWS for future use.
- Frameworks: React.js, Angular, and Vue.js lead in web development.
- Demographics: Predominantly young, highly educated, and male workforce.

APPENDIX



- Include any relevant additional charts, or tables that you may have created during the analysis phase.

JOB POSTINGS



POPULAR LANGUAGES

