The Next Wave of Tech: A Comprehensive Report on In-Demand Developer Skills

Name: Feifei Li

1/1/2026

Skills Network

IBM

OUTLINE

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

Skills Network

IBM

EXECUTIVE SUMMARY

Analyzed global developer skill trends using survey, job posting, and dashboard data

Identified top programming languages and databases in current and future demand

Found strong alignment between employer demand and developer learning interests

Results support strategic workforce planning and targeted upskilling initiatives
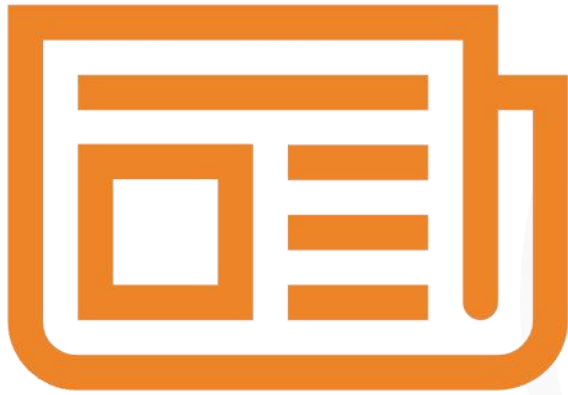
INTRODUCTION

Purpose: Identify emerging technology trends to support data-driven workforce decisions

Audience: Executive leadership, HR teams, and technology consultants

Value: Enables proactive hiring strategies, targeted training investments, and competitive advantage
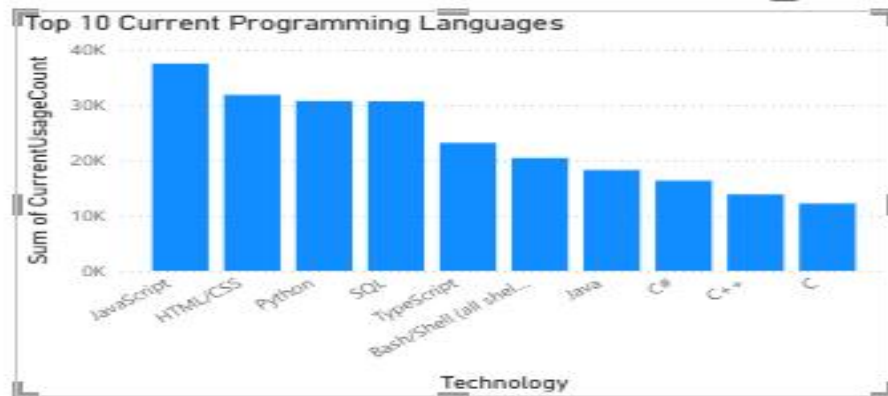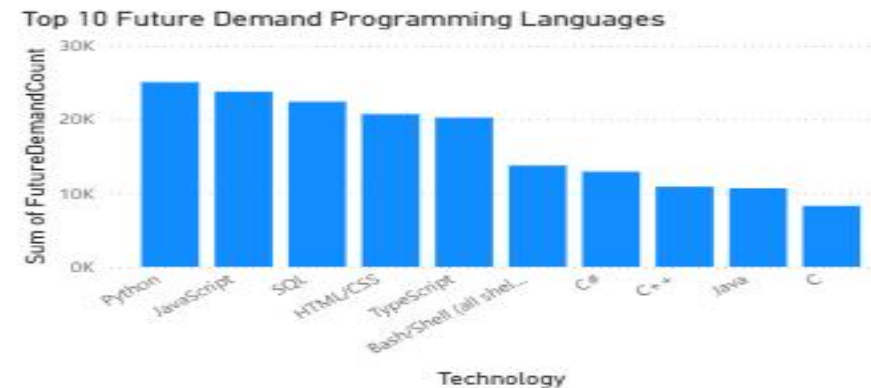
METHODOLOGY

- Data Sources:

  - Stack Overflow Annual Developer Survey

  - Job postings API data

  - Web-scraped programming language data

- Data Cleaning:

  - Removed duplicate responses

  - Handled missing values using mode/median imputation

  - Removed salary outliers using IQR method

- Tools: Python (Pandas), SQL, Power BI

PROGRAMMING LANGUAGE TRENDS

Current Year

Next Year

Python, JavaScript, and SQL dominate current usage across industries.

PROGRAMMING LANGUAGE TRENDS - FINDINGS & IMPLICATIONS

Findings

- Python remains the most dominant language

- JavaScript continues strong demand
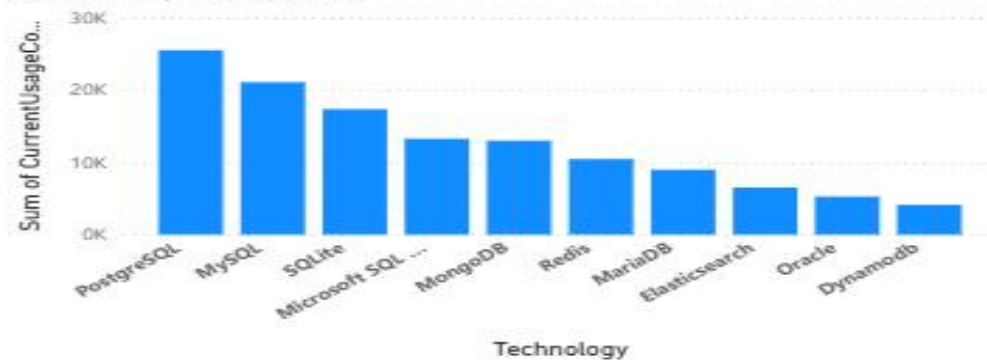
- AI-oriented languages show increased interest

Implications

- Organizations should prioritize Python-centric skill development

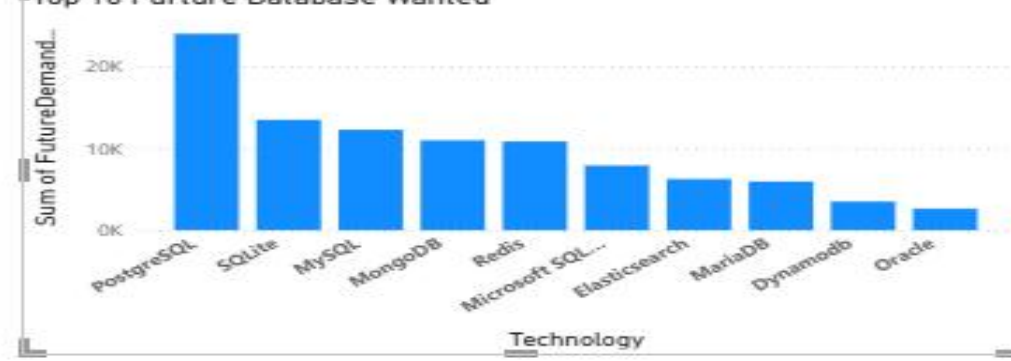- Future hiring should emphasize full-stack and data-driven roles

DATABASE TRENDS

Current Year

Next Year

DATABASE TRENDS

Findings

Relational databases
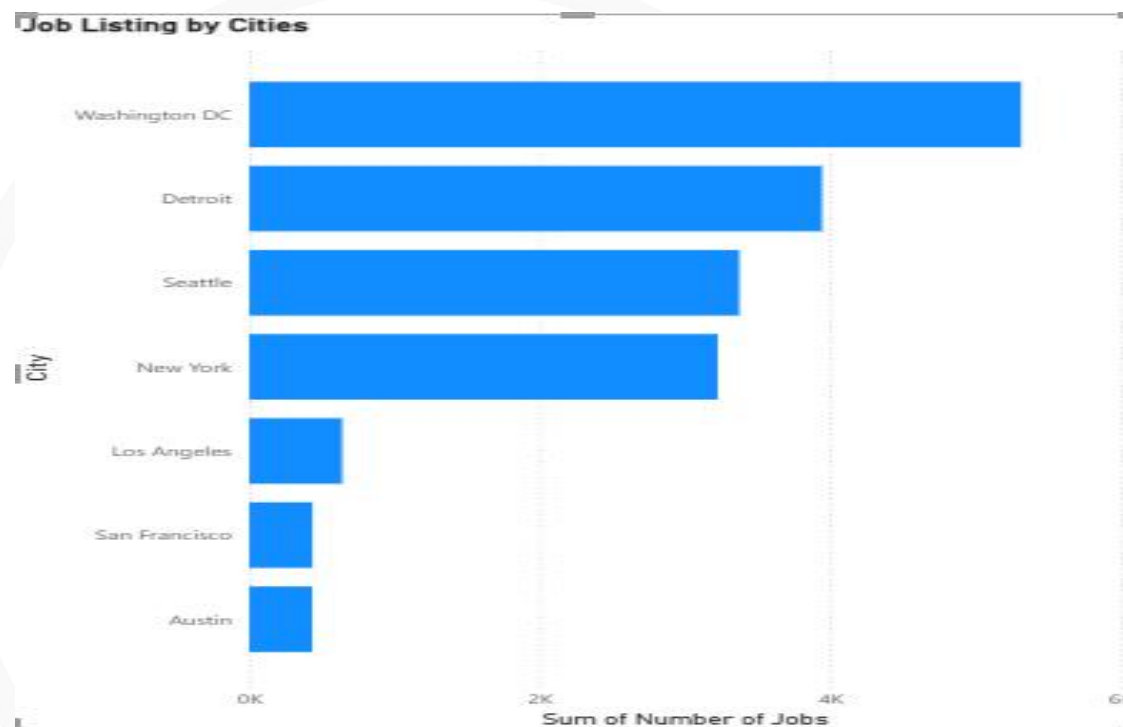(PostgreSQL, MySQL) remain
foundational

Cloud-native and NoSQL
databases show growing
demand

Implications

Companies should
modernize data
infrastructure

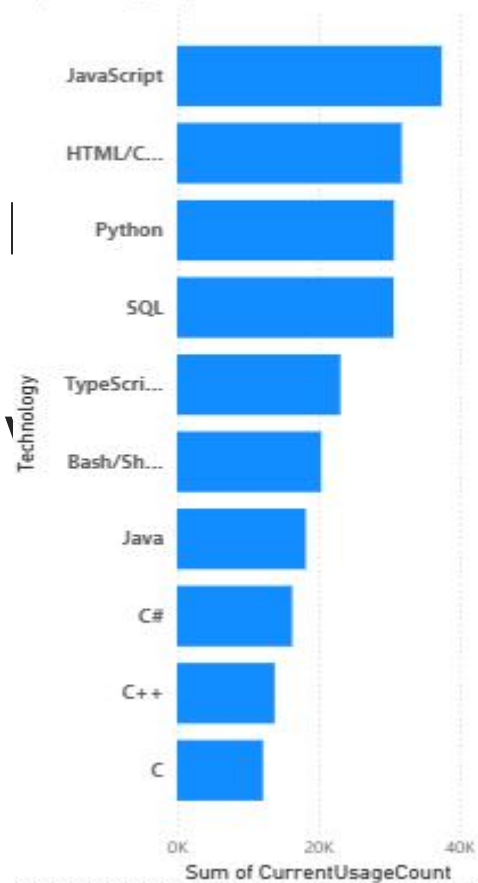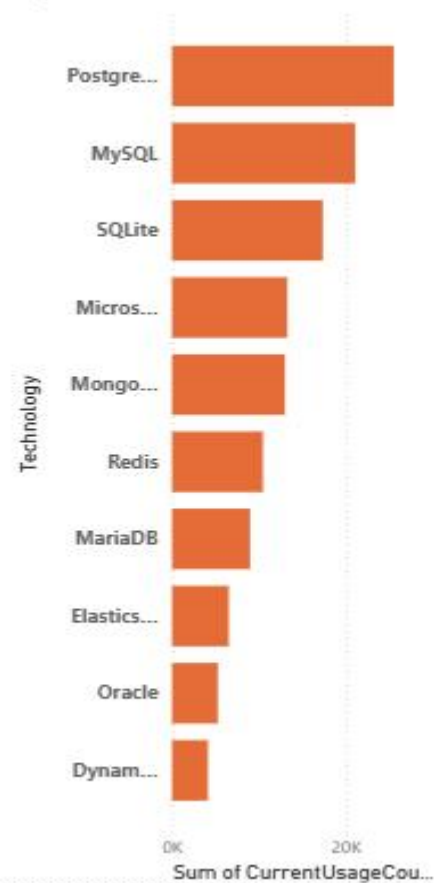Training should include both
SQL and cloud database
technologies

Skills Network

IBM

DASHBOARD

Job Listing by Cities

Major metropolitan areas show significantly higher demand for developer roles.

Current Tech Usage
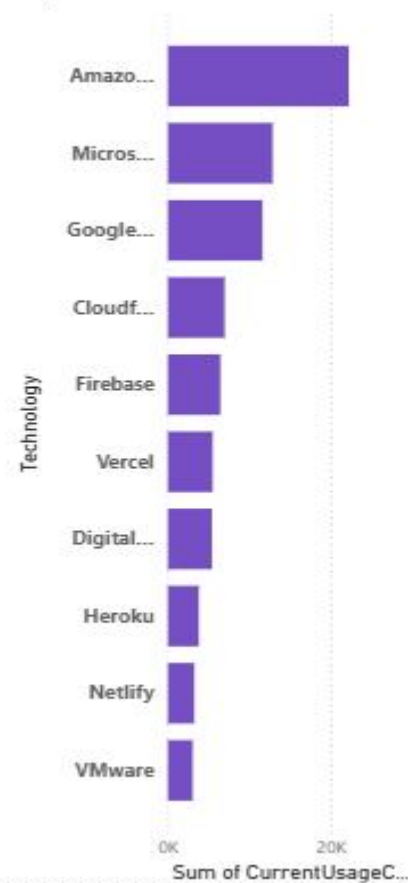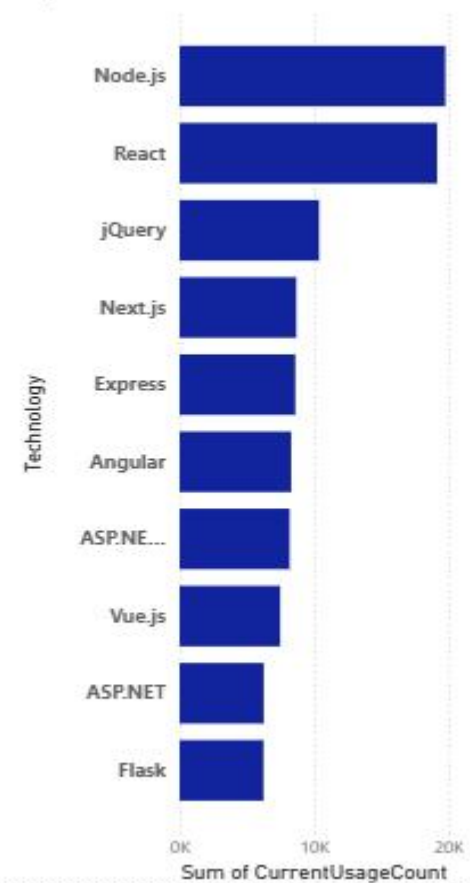
Future Trends
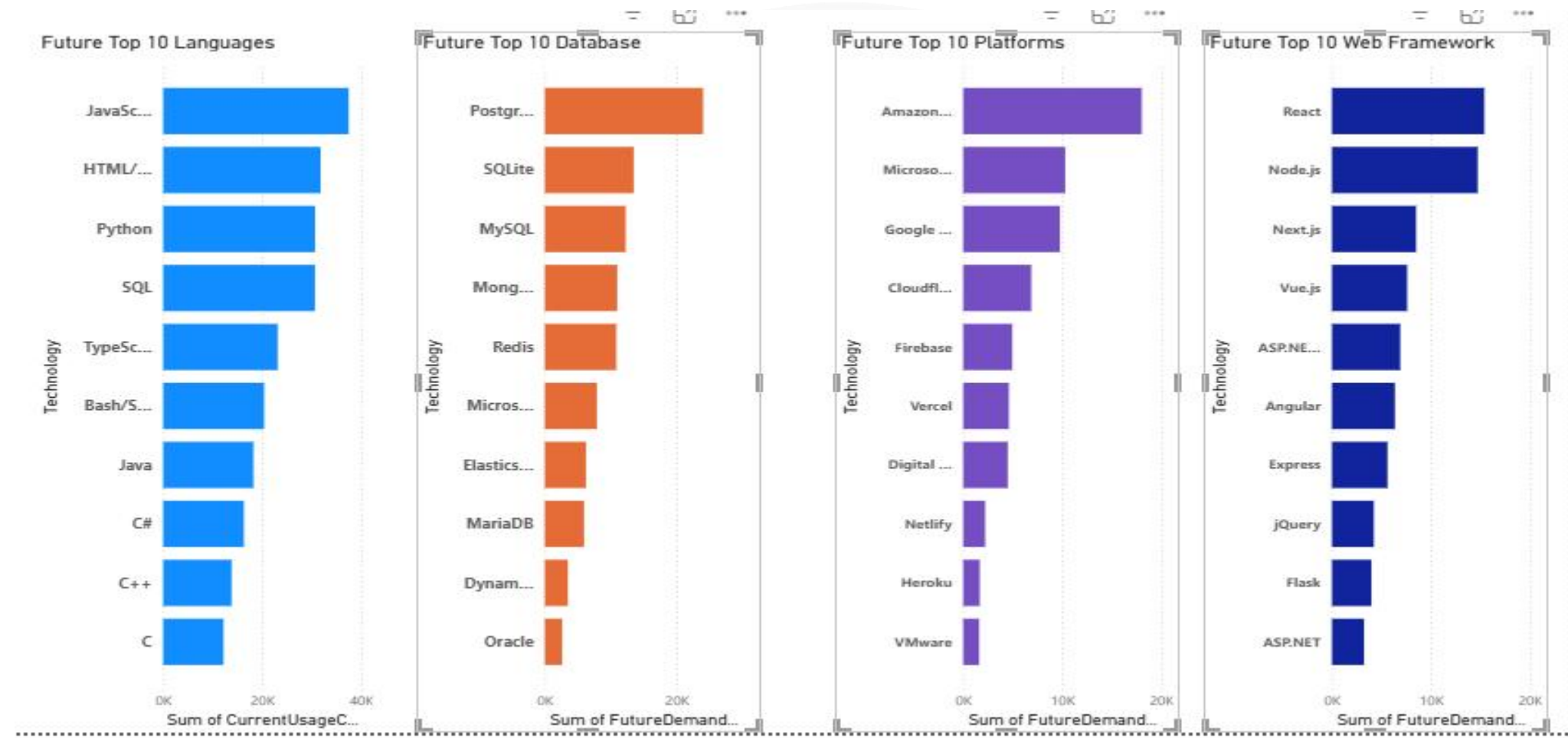
Demographics & Geography
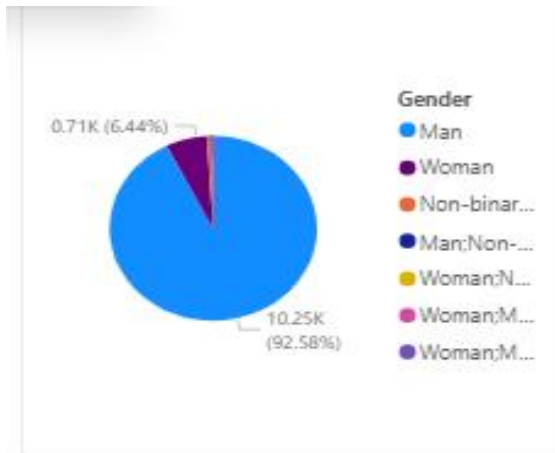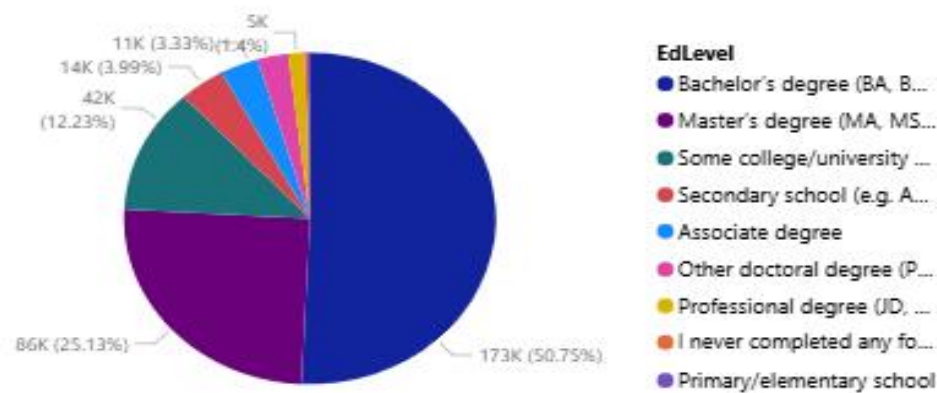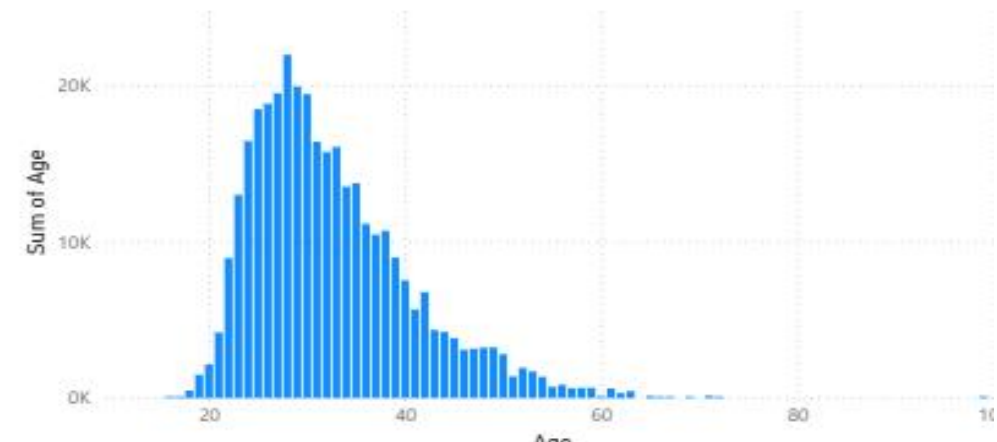
DISCUSSION

Python and SQL dominate both current use and future interest

Cloud and data-focused technologies are growing rapidly

Developer demographics show global participation with regional concentration

OVERALL FINDINGS & IMPLICATIONS

Strong alignment exists between industry demand and developer skill interests

Data and cloud technologies are central to future tech strategies

Organizations that invest early in upskilling will gain competitive advantage

CONCLUSION

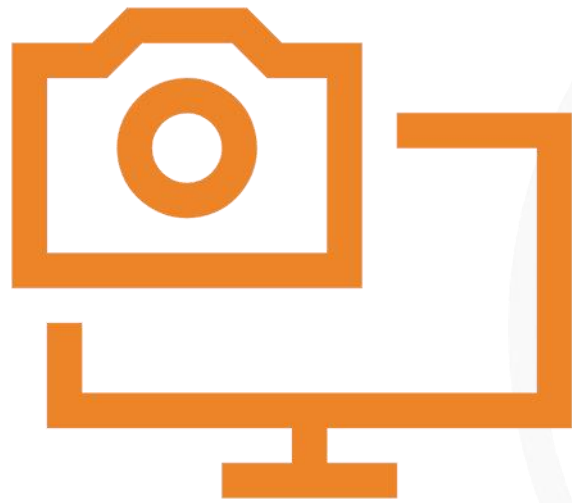Python, SQL, and JavaScript remain critical core skills

Database expertise is shifting toward scalable, cloud-ready solutions

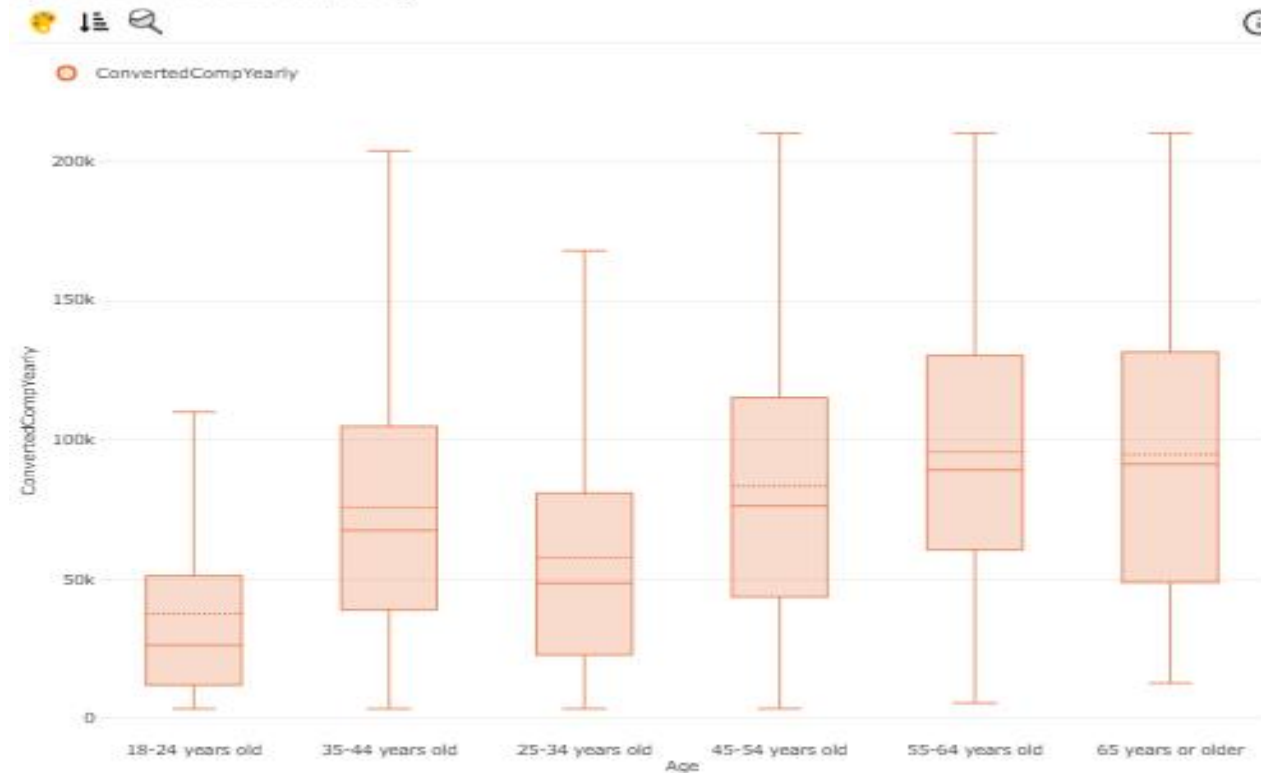Data-driven insights can guide effective hiring and training strategies
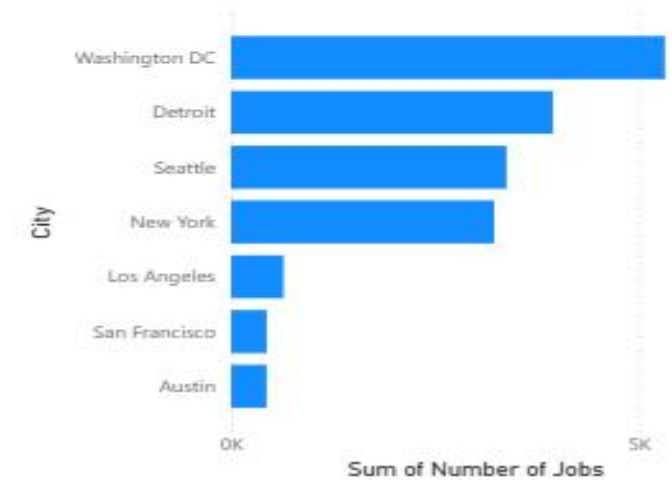
APPENDIX

JOB POSTINGS

Age and ConvertedCompYearly

Top 10 Language's Average Annual Salary

Language	Sum of Average Annual Salary
Swift	130801
Python	114383
C++	113865
Javascript	110981
Java	101013
Go	94082
R	92037
C#	88726
SQL	84793
PHP	84727
Total	**1015408**

Job Listing by Cities

POPULAR LANGUAGES

Popular Languages By Average Annual Salary

Skills Network