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The Future of Development and Predictive Analytics

OUTLINE

Executive Summary

Introduction

Methodology

Results

Visualization – Charts

Dashboard

Discussion

Findings & Implications

Conclusion

Appendix

EXECUTIVE SUMMARY

- Trends in popular programming languages
- Survey Data of Demographics
- Technological gap in countries
- Gender gap in area of technology interests



INTRODUCTION

About

Analyzing the trends in software development for IT solutions and highly experienced IT consultants.

Main Purpose

- What are the top programming languages in demand?
- What are the top databases in demand?
- What are the popular IDE's?

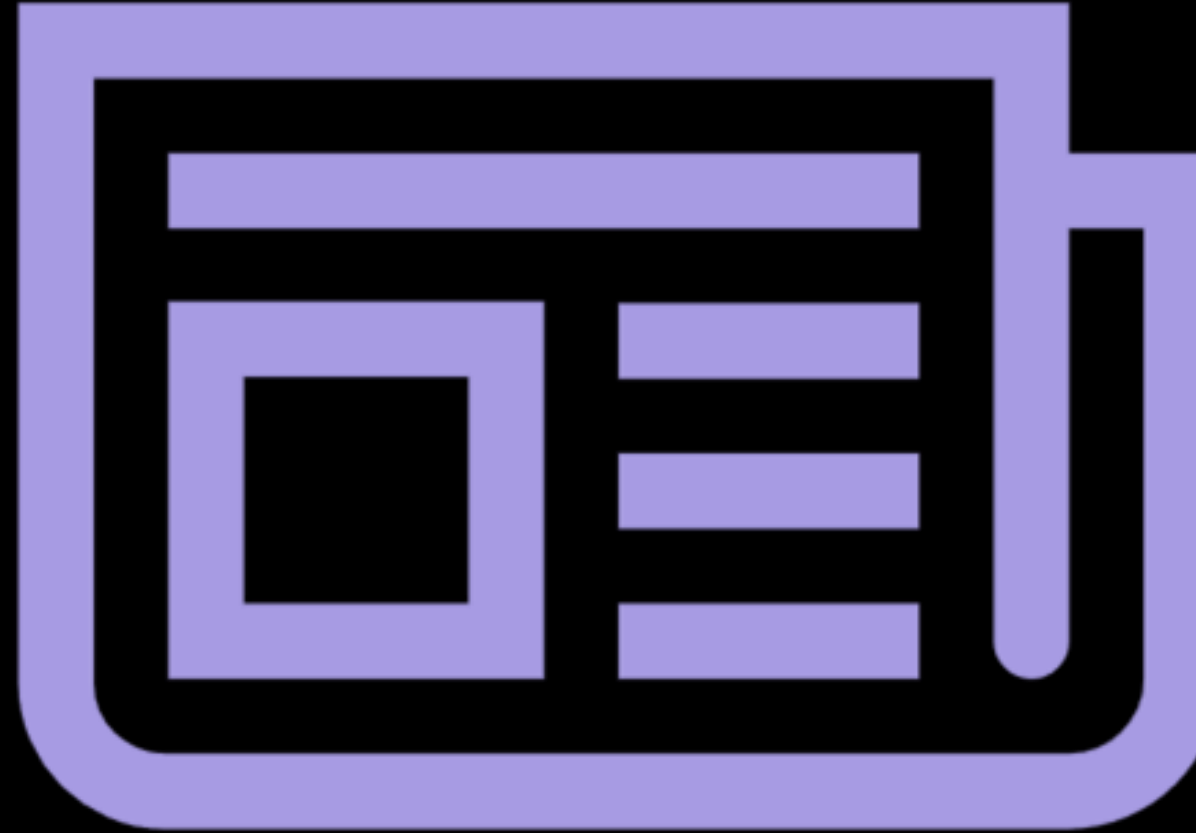
Audience

Tech enthusiasts, IT specialist, Business leaders



METHODOLOGY

- Data Collection
 - + Stack Overflow Developer 2019 Survey
 - + GitHub Job Postings
 - + Programming Languages Annual Salary
 - + Can be done with APIs, Web Scraping, and Request Library
- Data Wrangling
- Exploratory Data Analysis
 - + Analyzing data distributions
 - + Handling outliers
 - + Correlations
- Data Visualizations
- Dashboards

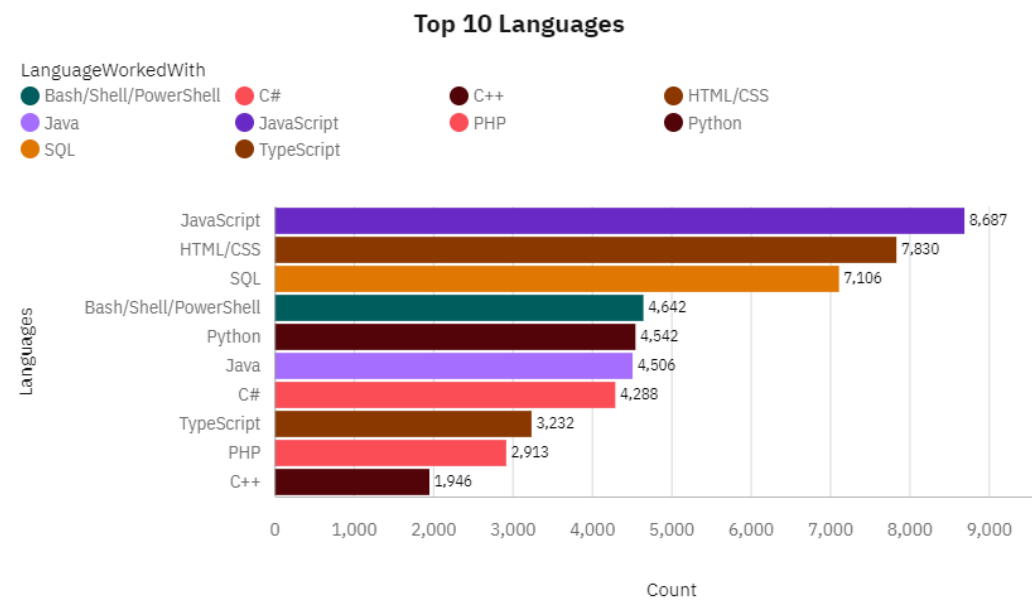


- Python overtakes Java, becoming the 5th most preferred language with significant growth. It stands as the fastest growing major programming language.
- JavaScript remains the most used programming language.
- jQuery is the most widely used among web frameworks, with React.js surpassing Angular in developer usage this year.
- Globally, men represent approximately 90% of respondents, with higher female representation among students than professional developers in regions like the US, India, and the UK.
- Around 3/4 of professional developers globally hold at least a bachelor's degree, aligning with past findings.
- 3/4 of survey respondents in professional developer roles are under 35 years old

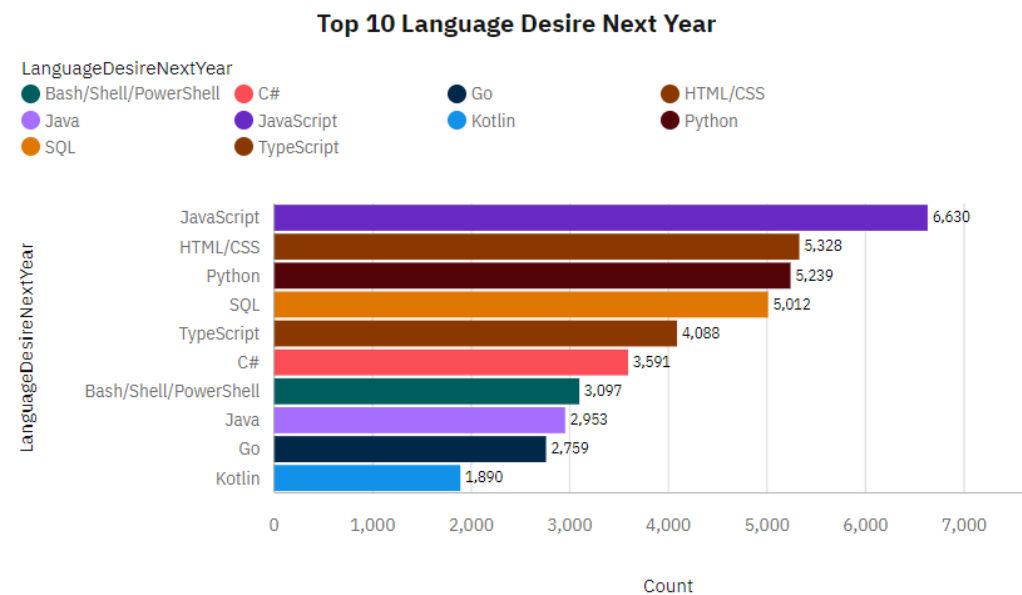
RESULTS

PROGRAMMING LANGUAGE TRENDS

Current Year



Next Year



Findings

JavaScript leads the top programming languages

Python and TypeScript language keeps growing in pace

HTML/CSS still considered to be the second lead in using web development language

Implications

Web Development are still in high demand

Python leads the 3rd rank in programming trend languages

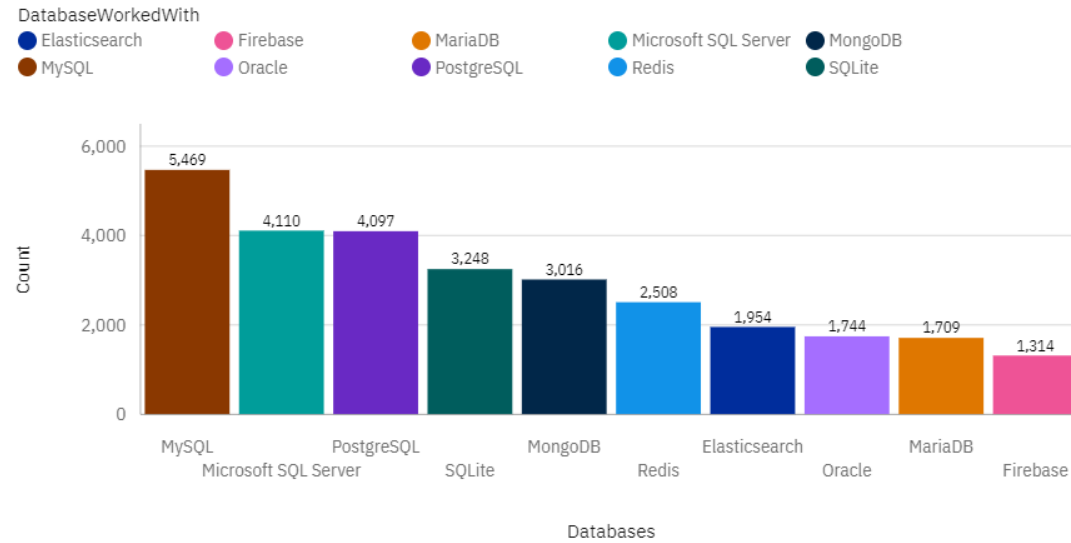
Big Data technology in companies still require SQL

PROGRAMMING LANGUAGE TRENDS - FINDINGS & IMPLICATIONS

DATABASE TRENDS

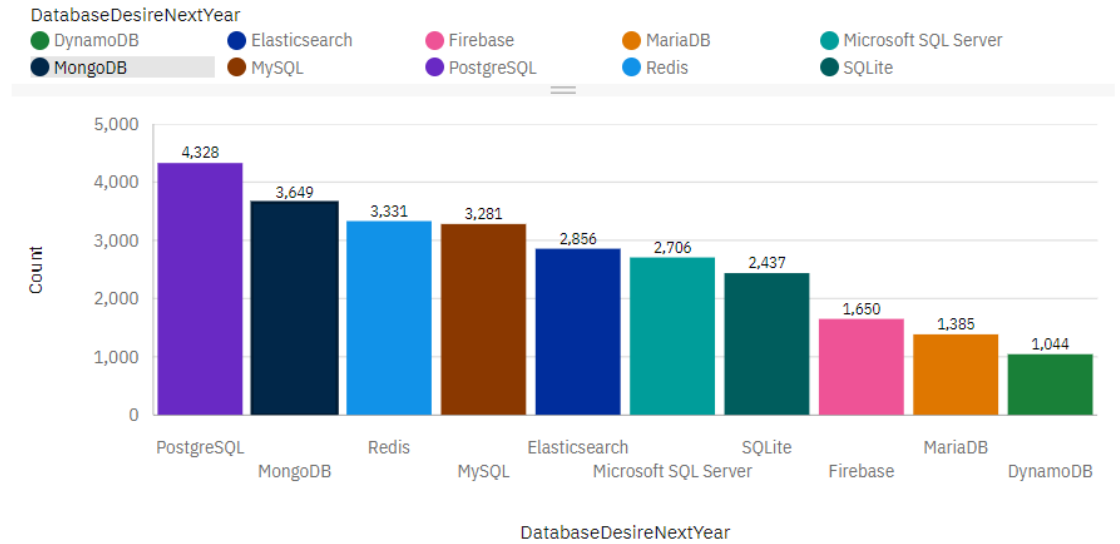
Current Year

Top 10 Databases



Next Year

Top 10 Database Desire Next Year



DATABASE TRENDS - FINDINGS & IMPLICATION S

Findings

MySQL is the most used database

No interest in Microsoft SQL Server and SQLite

High interest in PostgreSQL and MongoDB

Implications

PostgreSQL and MongoDB leads the top trending in databases

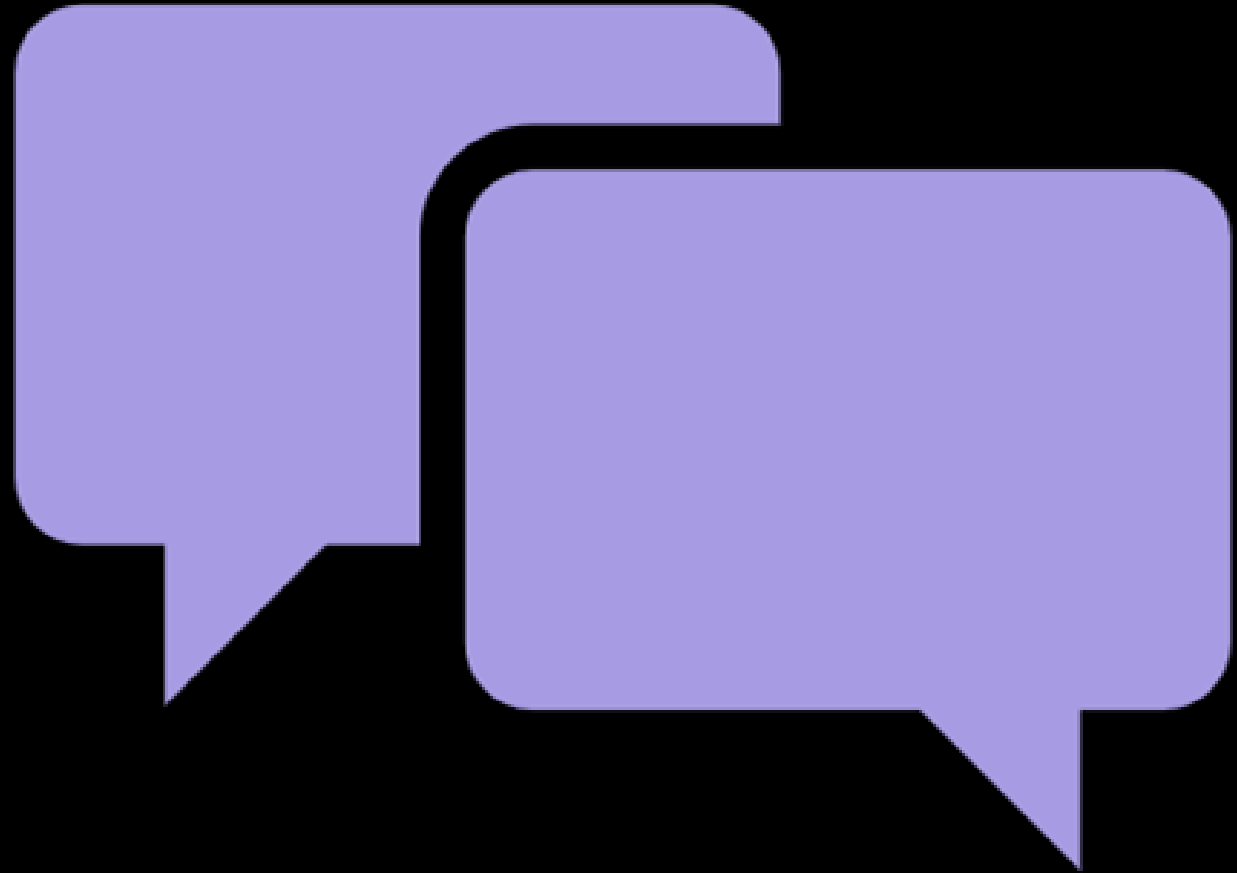
Microsoft SQL Server and SQLite booms the establishment in database trends.

Redis support abstract data types.

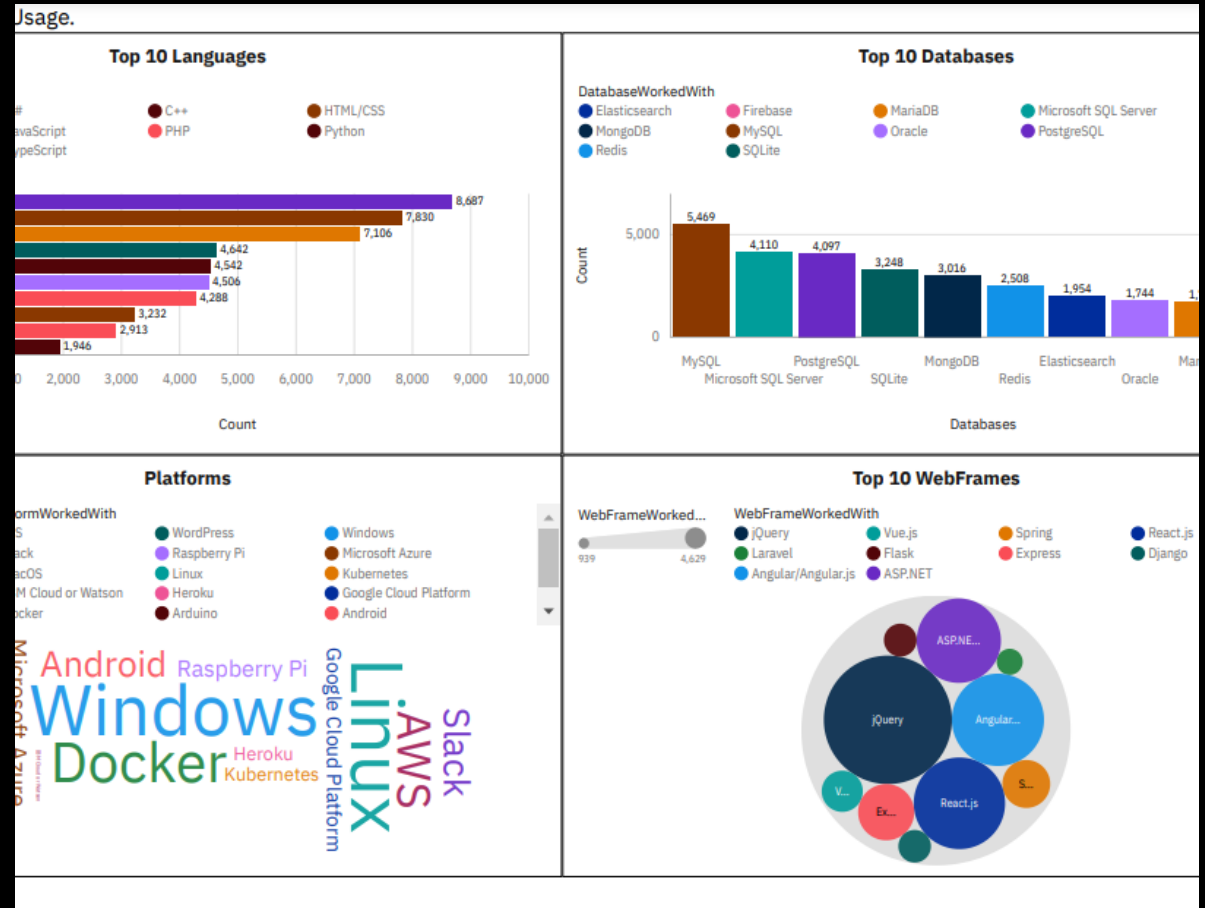
DASHBOARD

- **Dashboard Link:**

- https://us1.ca.analytics.ibm.com/bi/?perspective=dashboard&pathRef=.my_folders%2FSurvey%2BData%2BTechnologies&action=view&mode=dashboard&subView=model0000019173874c05_000000000

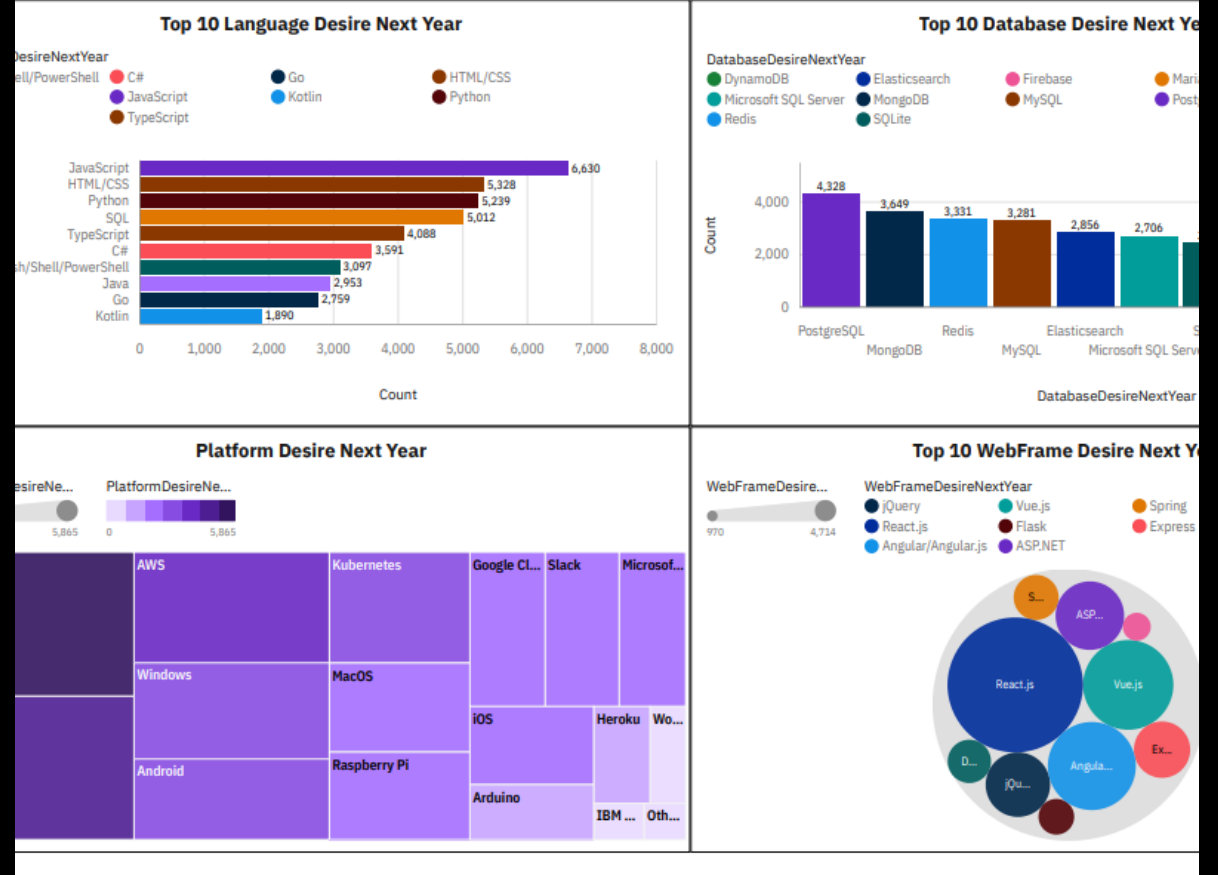


CURRENT TECHNOLOGY USAGE

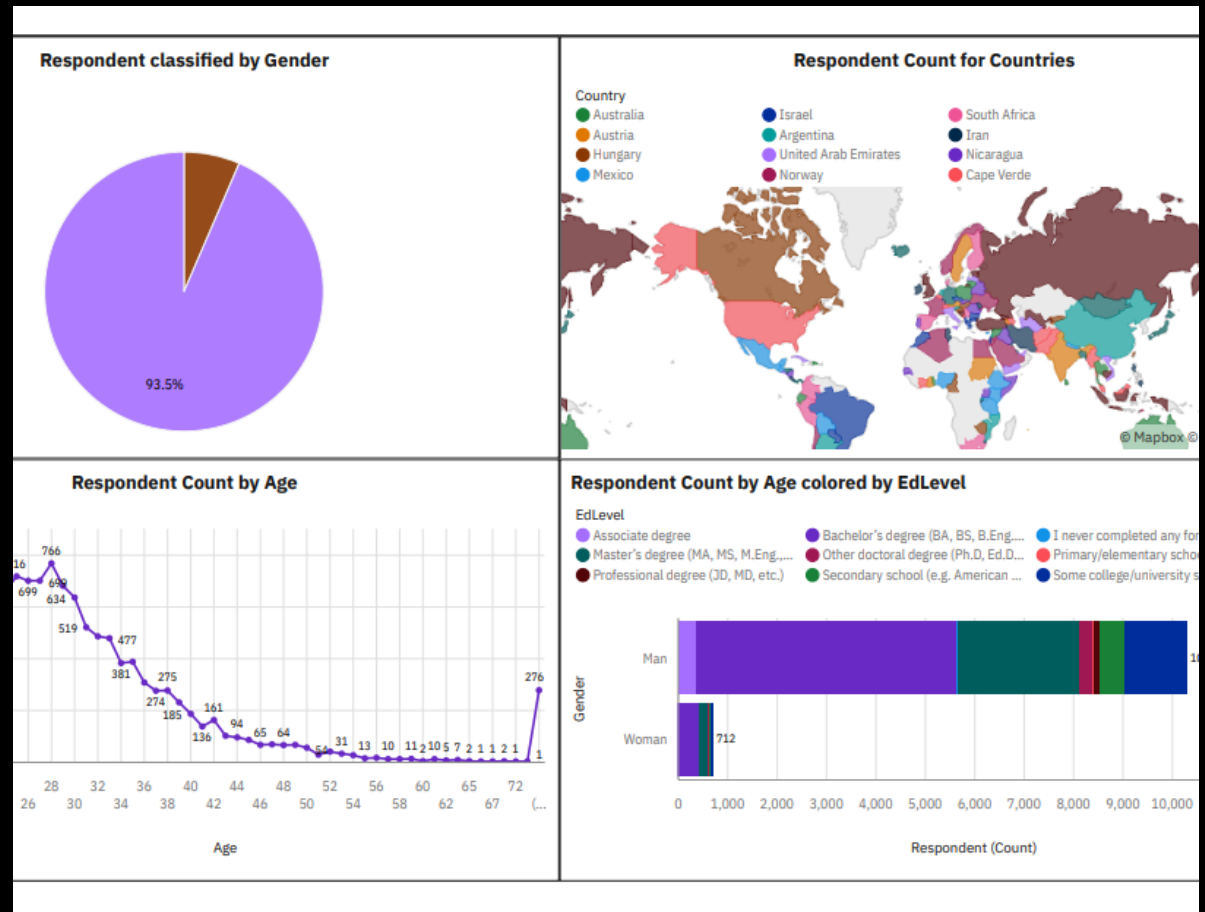


FUTURE TECHNOLOGY TRENDS

Technology Trend

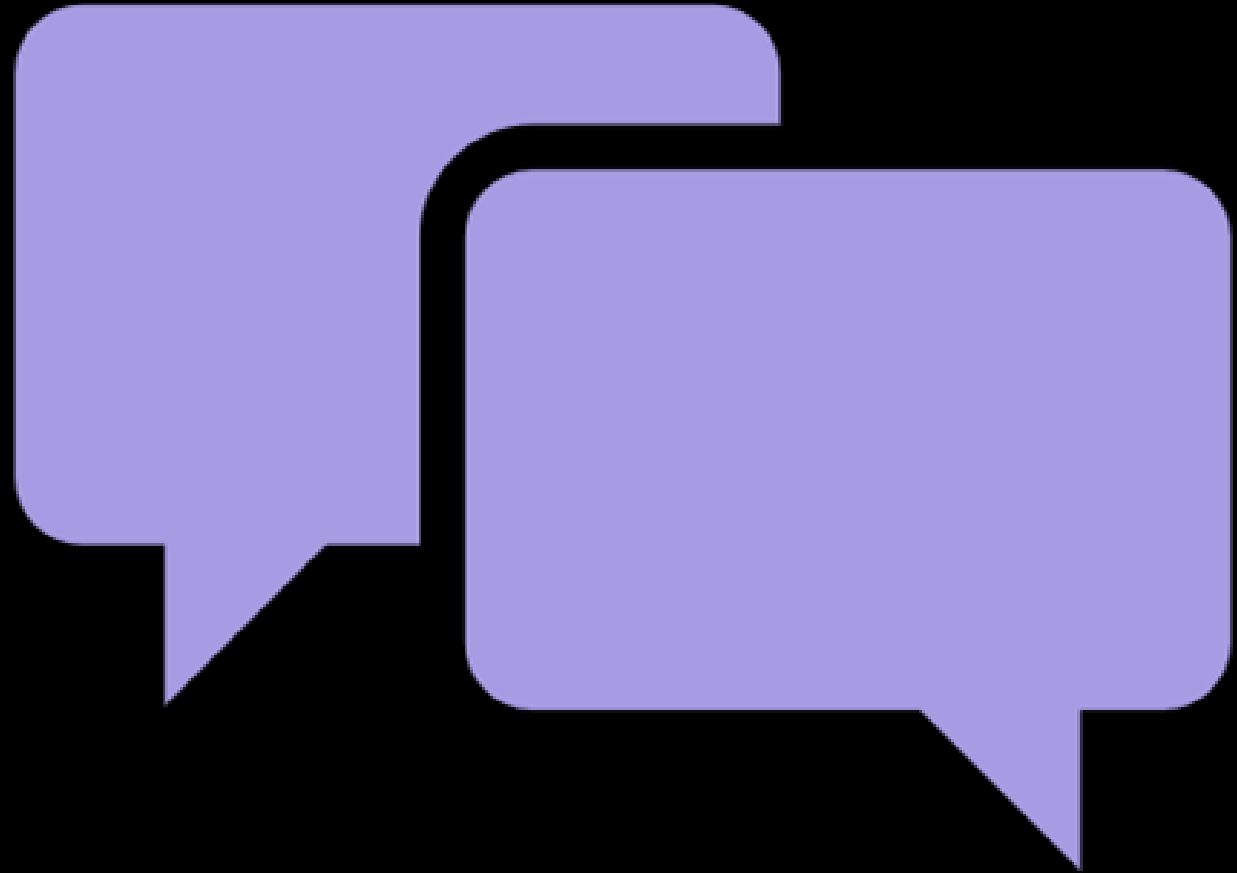


DEMOGRAPHICS



DISCUSSION

- Technology trends in current and next year
- Training skills for workers and young students
- Female needs more participation in technology fields
- Eliminate age and discrimination in employment of all developed countries.



Findings

- Fast changing technology every year
- Concentrates on several countries that are developed.
- Gender gap in technology jobs
- Platforms like Docker and AWS are growing efficiently.

Implications

- Developers without master's degrees has a major count
- Companies needs to be flexible and adjust to rapid changes
- Impact of job's hiring
- Shift to faster app deployment and cloud services in future.

OVERALL FINDINGS & IMPLICATIONS

CONCLUSION

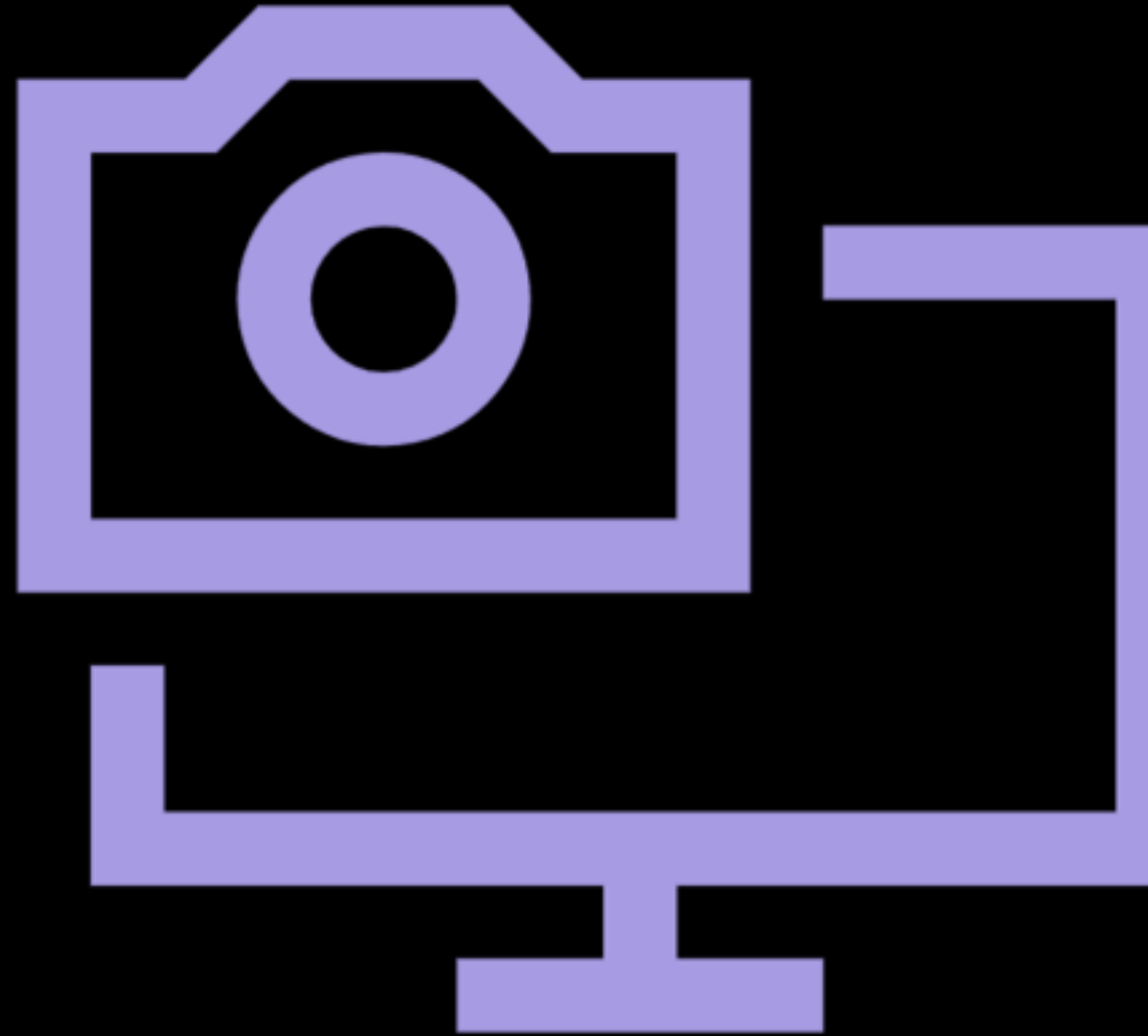
- Popular trends of latest technologies and tools of IT solutions and consultants can be obtained in different fields.
- Men and Women are considered equal to work in areas of technology and interests which can lead in developed countries with a great scale of skills.
- Incorporate Machine Learning to predict trends, patterns and salaries.



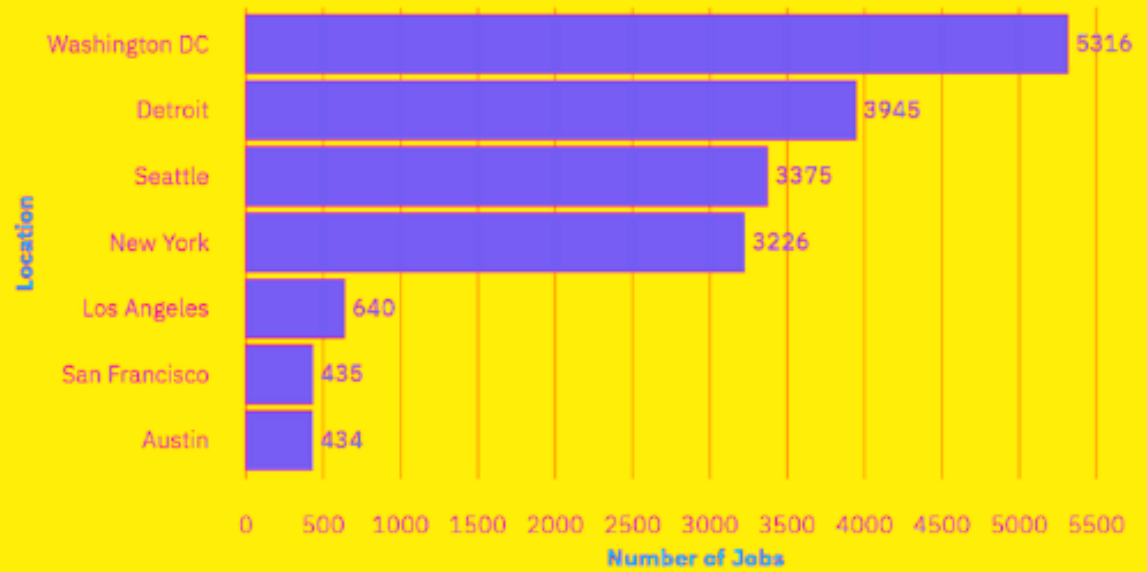
APPENDIX

○A – JOB POSTINGS

○B – POPULAR LANGUAGES



JOB POSTINGS



POPULAR LANGUAGES

