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# The Future of Development and Predictive Analytics

# OUTLINE

Executive Summary

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Methodology

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Visualization – Charts

Dashboard

Discussion

Findings & Implications

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# 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?

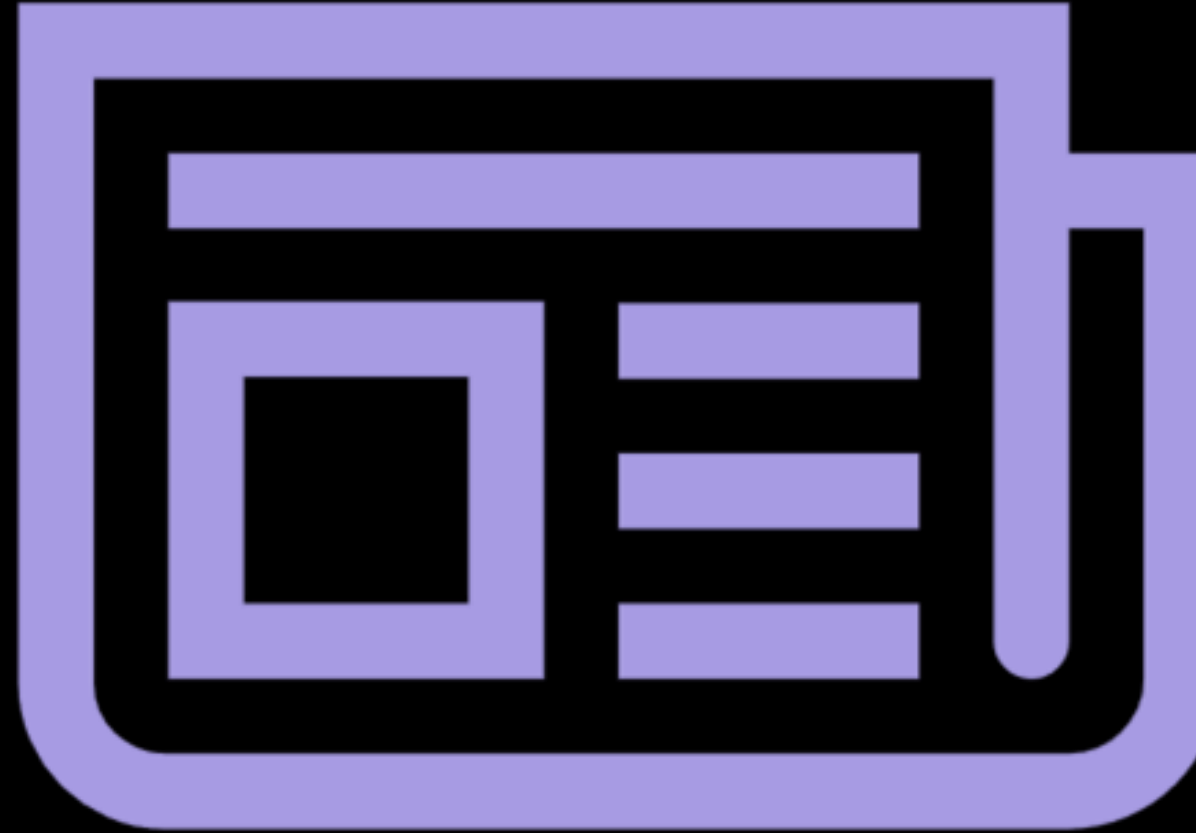
## Audience

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

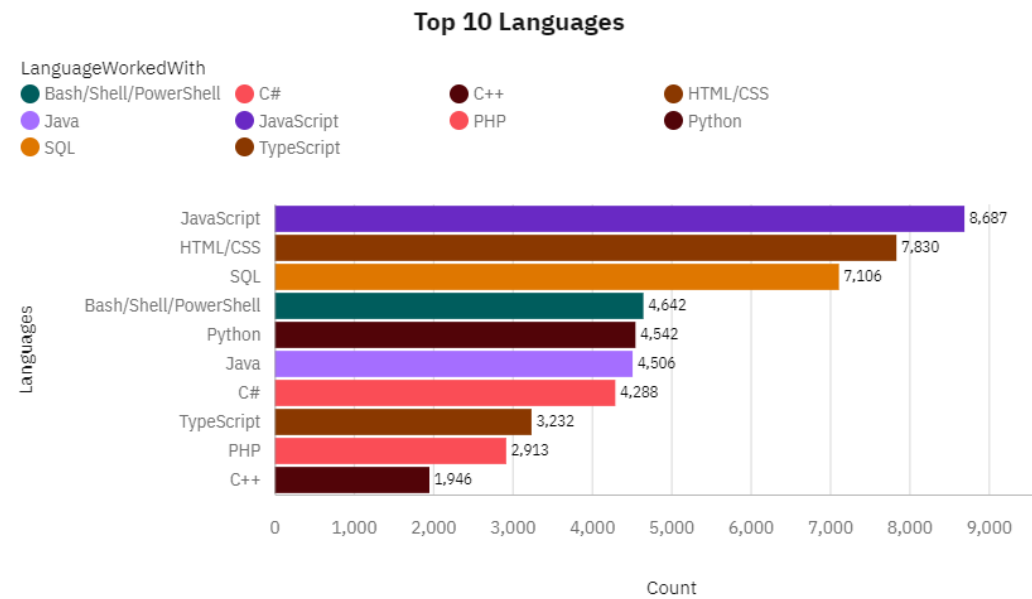


- Python overtakes Java, becoming the 5th most preferred language with significant growth. It stands as the fastest growing major programming language.
- JavaScript remains the most used programming language.
- jQuery is the most widely used among web frameworks, with React.js surpassing Angular in developer 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

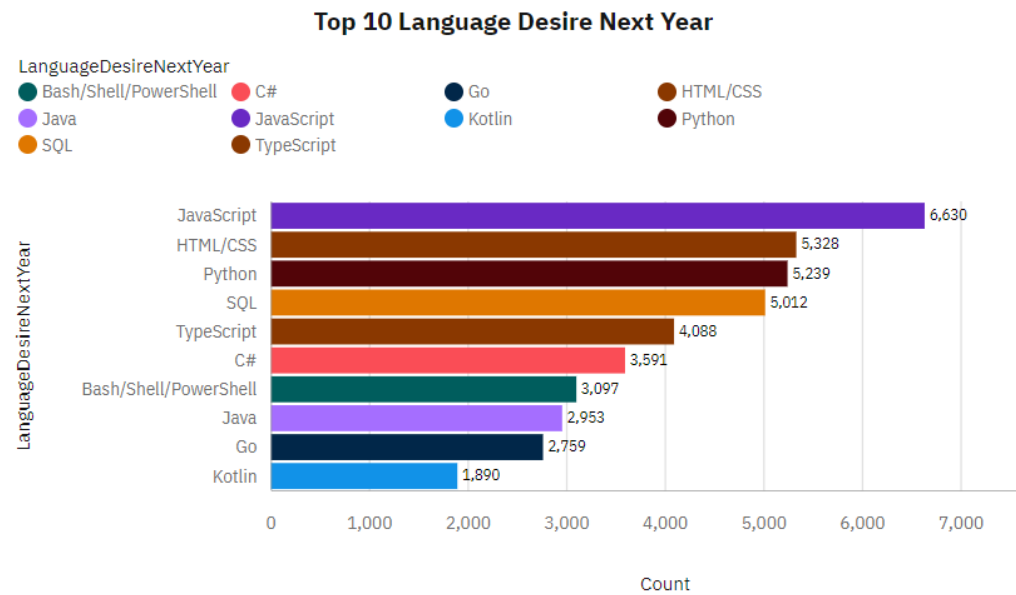
# RESULTS

# 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

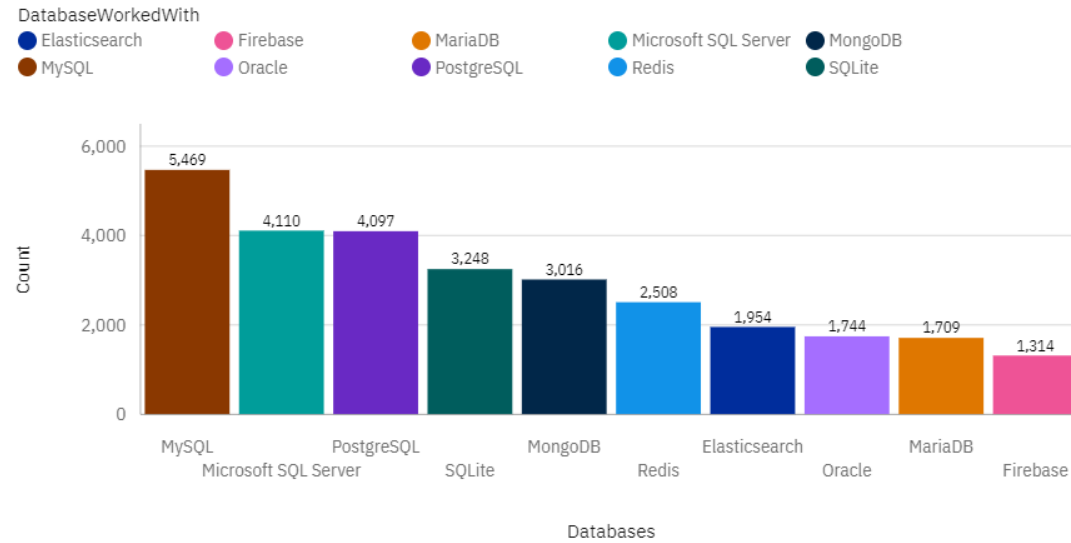
# **PROGRAMMING LANGUAGE TRENDS - FINDINGS & IMPLICATIONS**



# DATABASE TRENDS

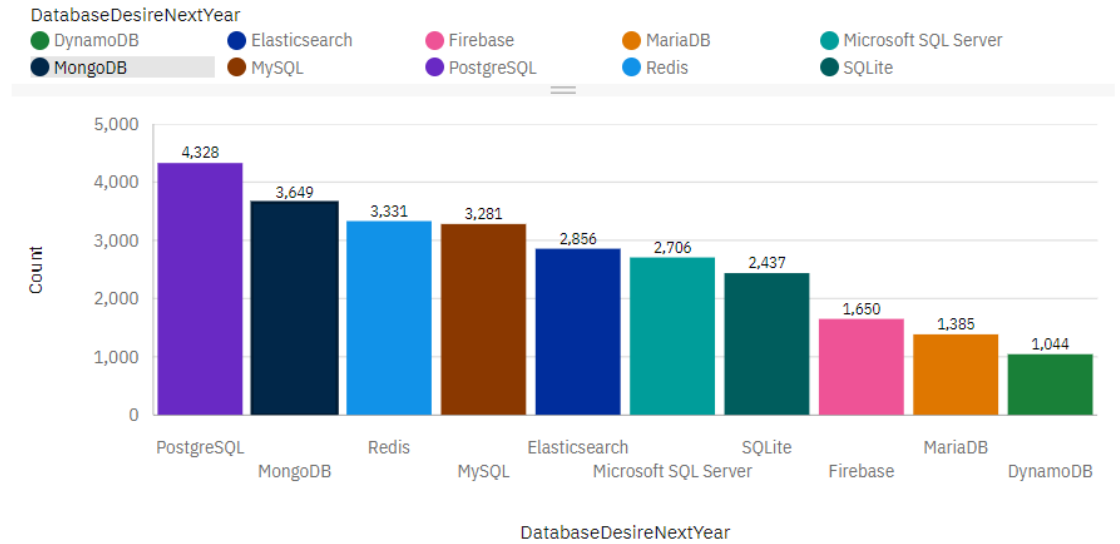
Current Year

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

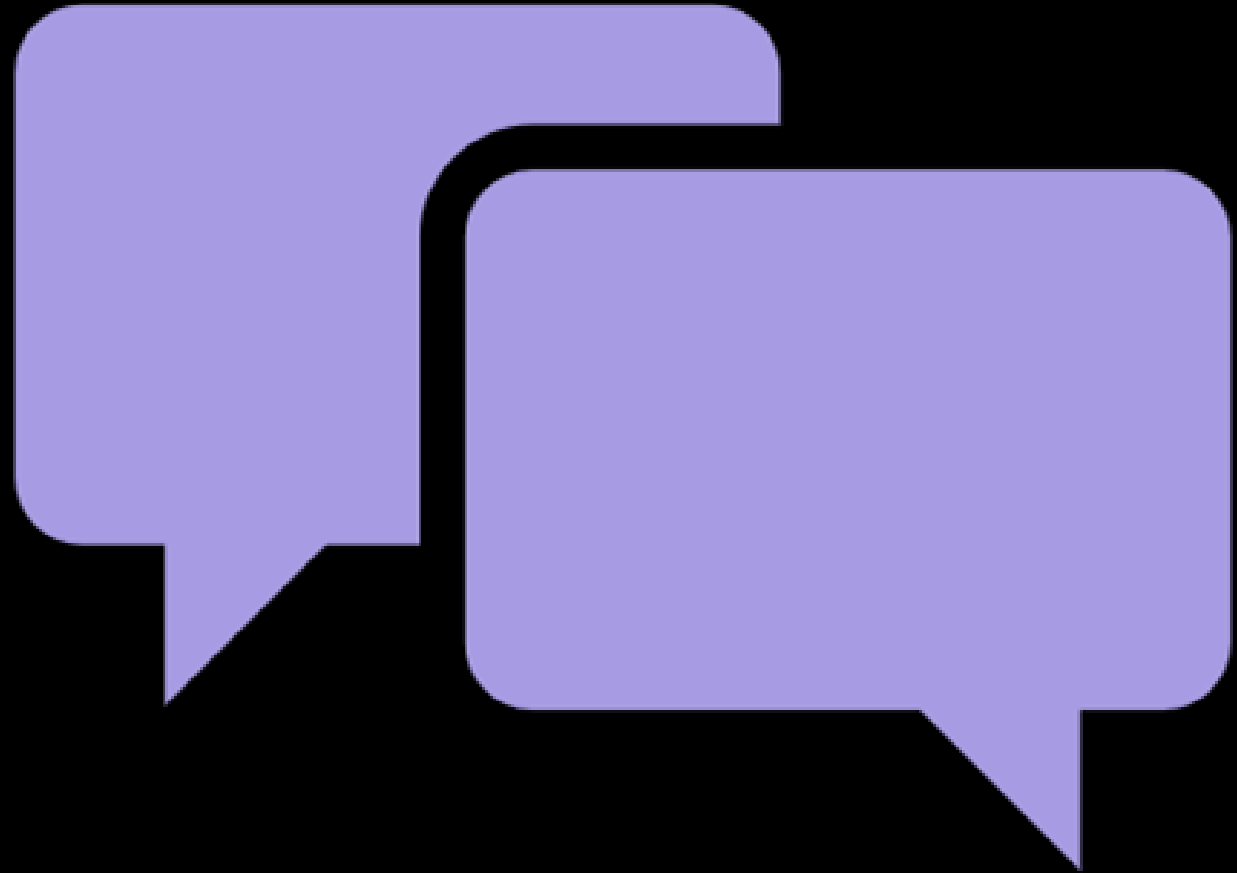
Microsoft SQL Server and SQLite booms the establishment in database trends.

Redis support abstract data types.

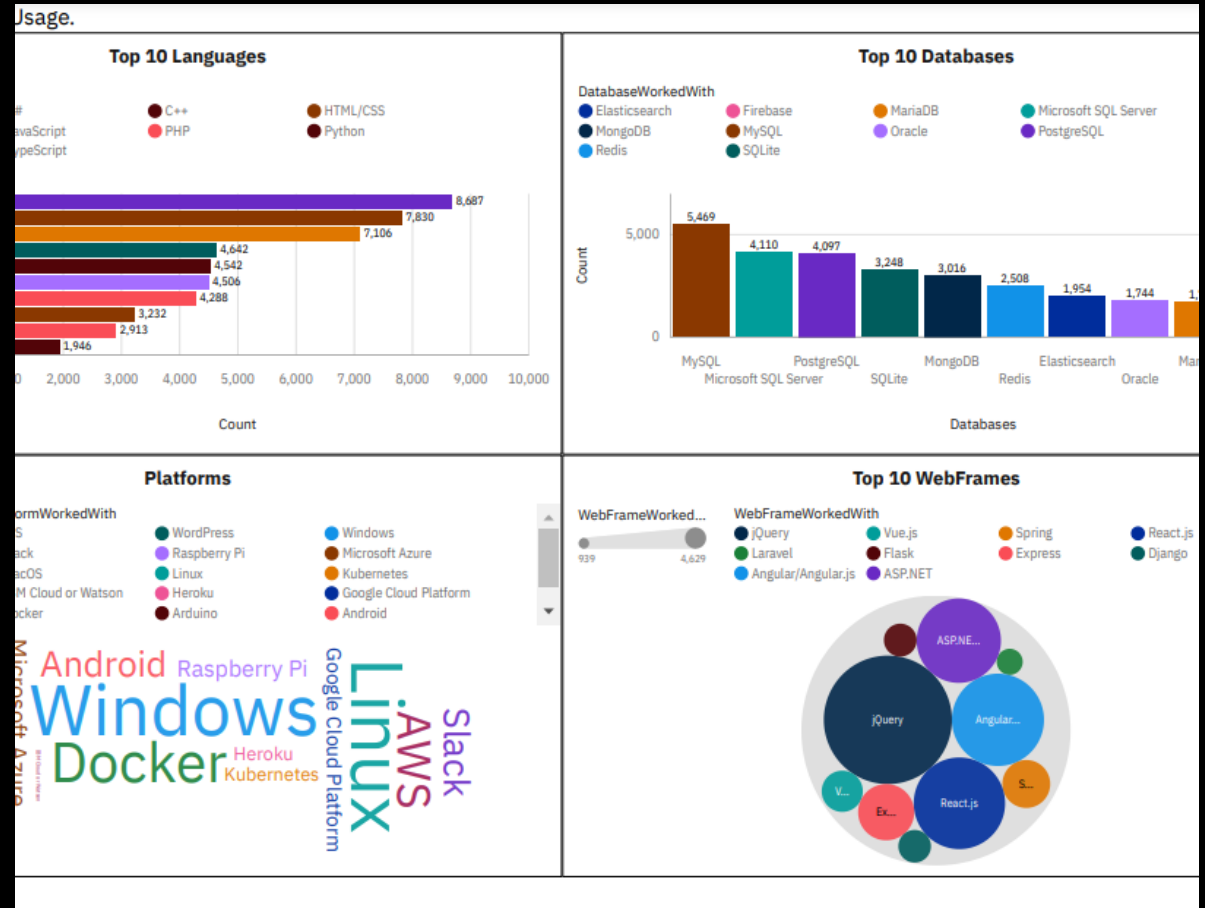
# DASHBOARD

- **Dashboard Link:**

- [https://us1.ca.analytics.ibm.com/bi/?perspective=dashboard&pathRef=.my\\_folders%2FSurvey%2BData%2BTechnologies&action=view&mode=dashboard&subView=model0000019173874c05\\_000000000](https://us1.ca.analytics.ibm.com/bi/?perspective=dashboard&pathRef=.my_folders%2FSurvey%2BData%2BTechnologies&action=view&mode=dashboard&subView=model0000019173874c05_000000000)

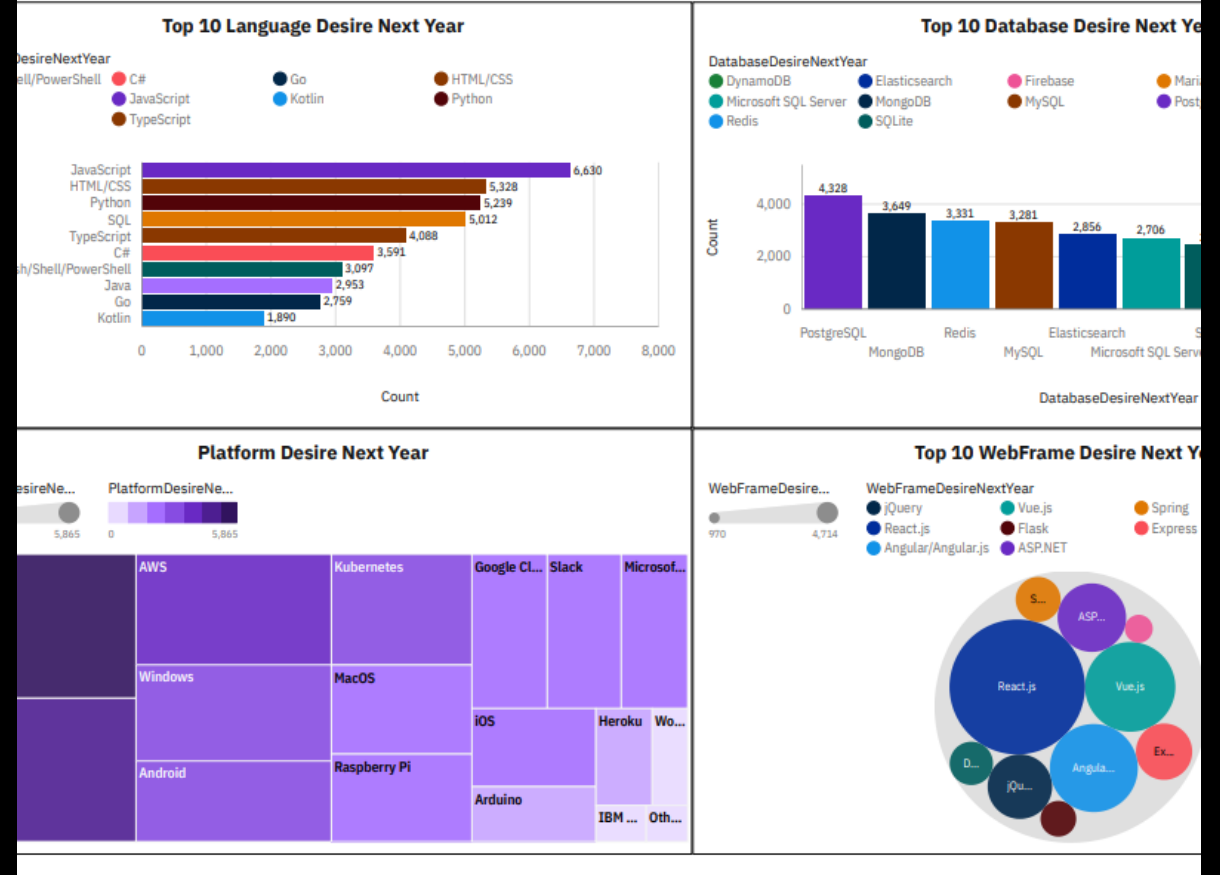


# CURRENT TECHNOLOGY USAGE

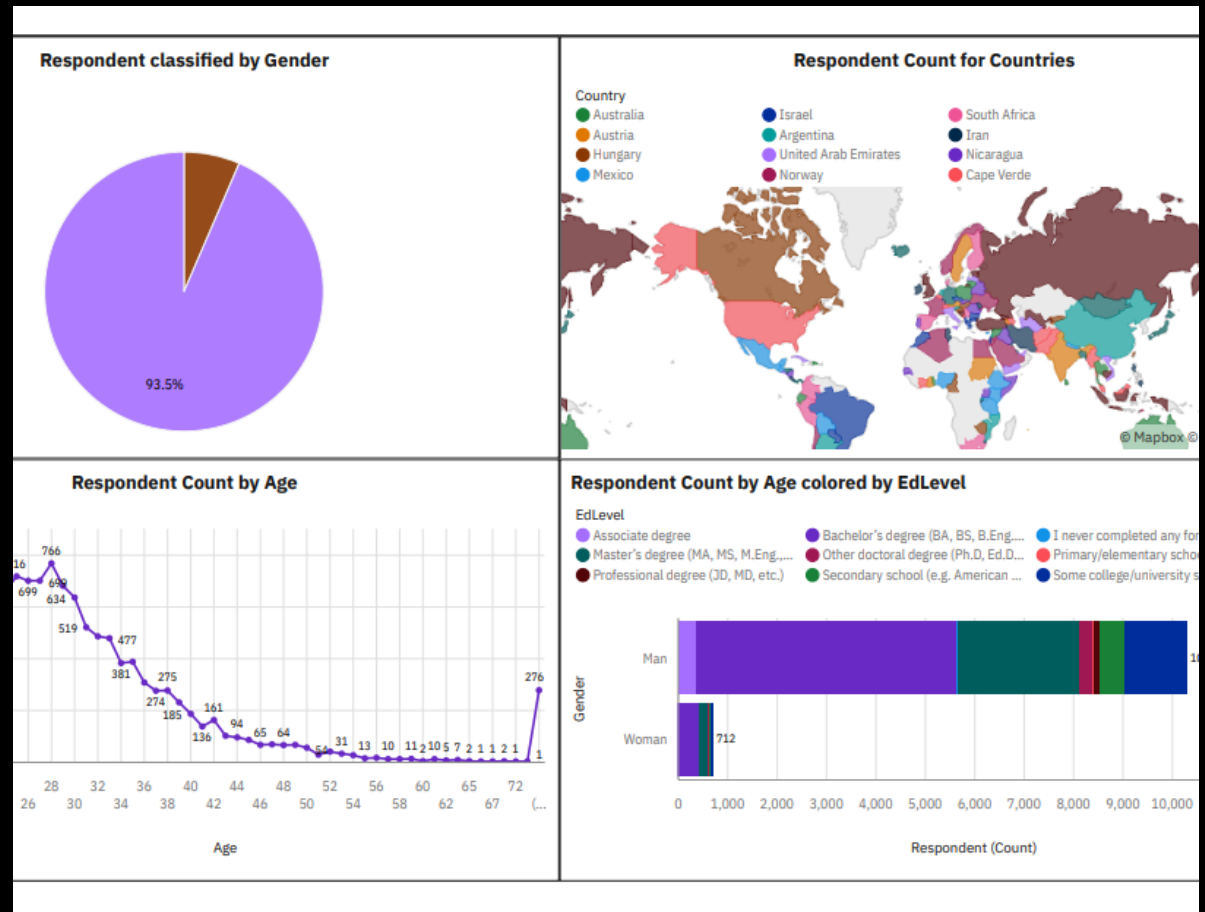


# FUTURE TECHNOLOGY TRENDS

## Technology Trend

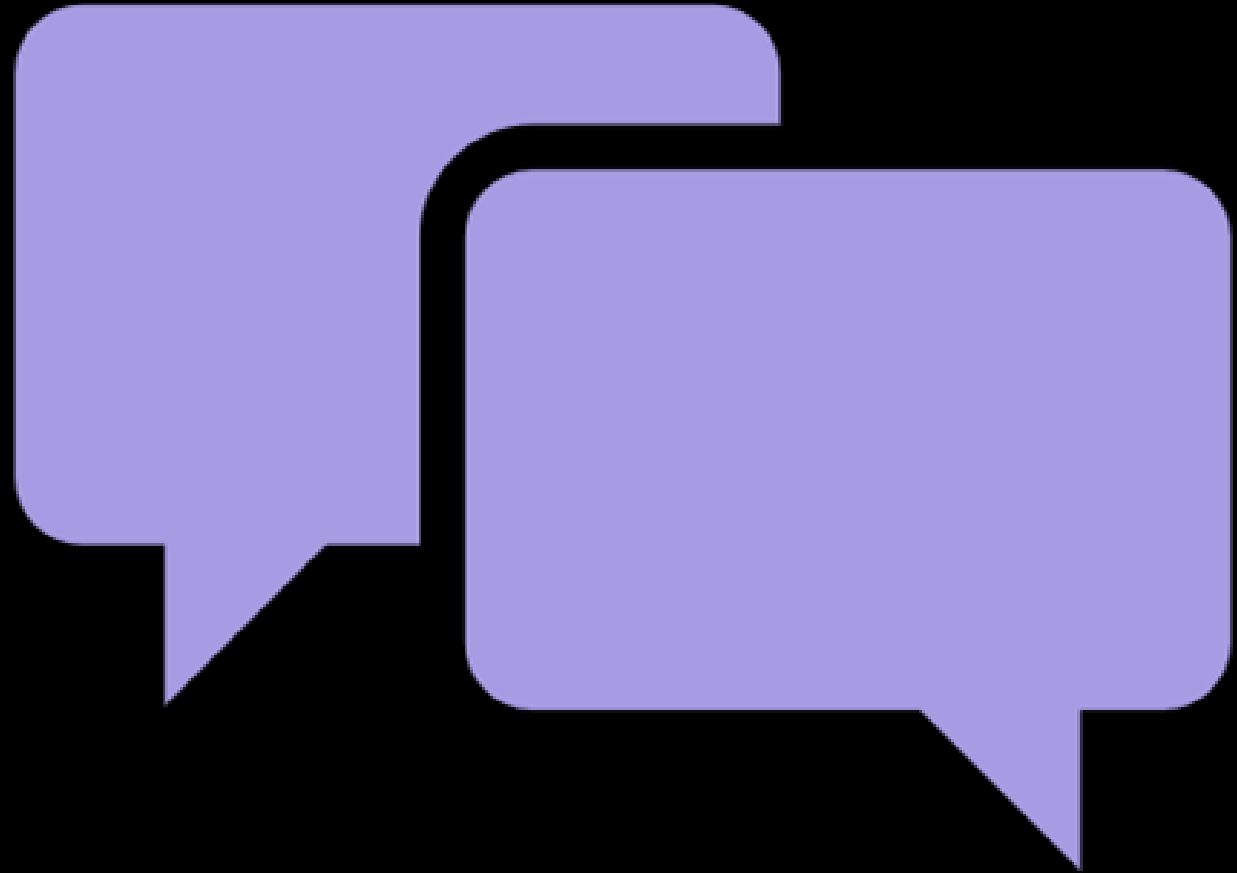


# DEMOGRAPHICS



# 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

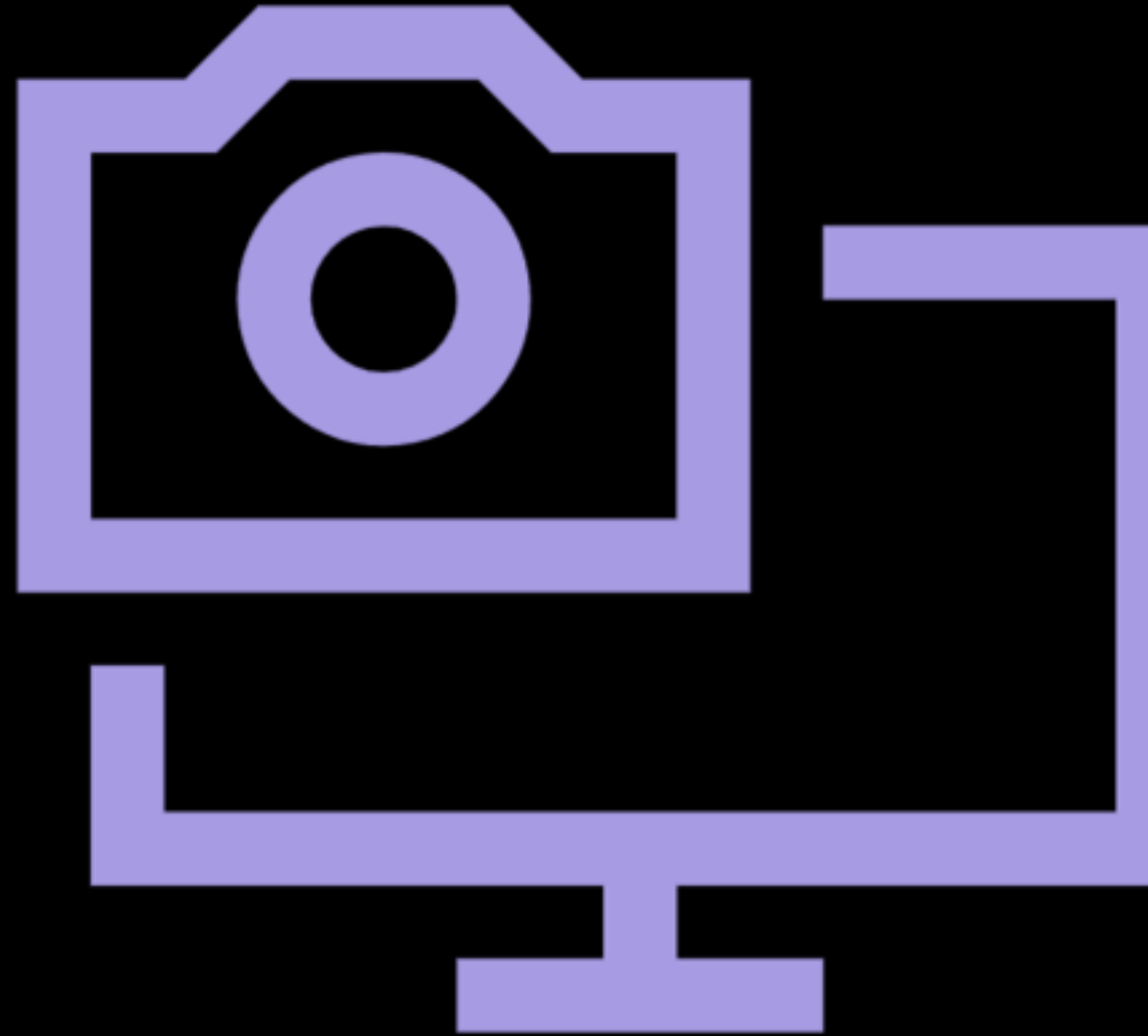
- Popular trends of latest technologies and tools of IT solutions and consultants can be obtained in different fields.
- Men and Women are considered equal to work in areas of technology and interests which can lead in developed countries with a great scale of skills.
- Incorporate Machine Learning to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



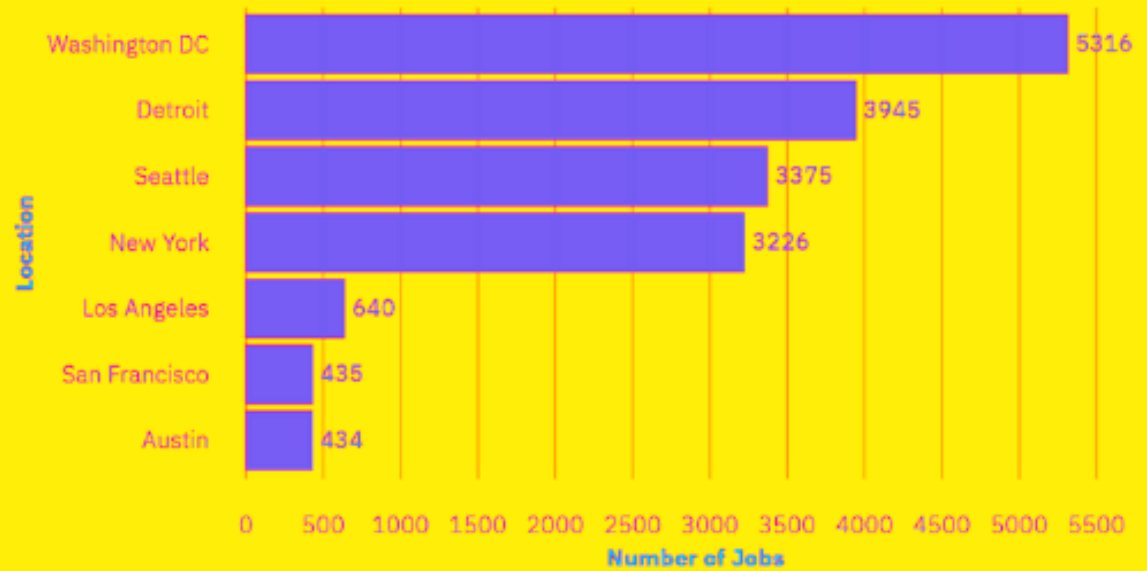
# APPENDIX

○A – JOB POSTINGS

○B – POPULAR LANGUAGES



# JOB POSTINGS



# POPULAR LANGUAGES

