Stack Overflow Developer Survey Report 2024

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OUTLINE

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- Methodology
- Results
  - Visualization – Charts
  - Dashboard
- Discussion
  - Findings & Implications
- Conclusion
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EXECUTIVE SUMMARY

- **Current Technology Usage**
  - Top 10 Language Used by respondents
  - Top 10 Platform Used by respondents
  - Top 10 Database Used by respondents
  - Top 10 Webframe Used by respondents

- **Future Technology Trend**
  - Top 10 Language desired by respondents
  - Top 10 Platform desired by respondents
  - Top 10 Dataframe desired by respondents
  - Top 10 Webframe desired by respondents

- **Demographics**
  - Distribution of Respondents by Age
  - Distribution of Respondents by Country
  - Distribution of Respondents by Education Level

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INTRODUCTION

- Every year, Stack Overflow conducts one of the most comprehensive surveys of developers around the world, gathering insights on their tools, technologies, work environments, and career trends.

- The **Stack Overflow Developer Survey Report** isn't just a snapshot of the developer community — it's a roadmap for where the tech world is heading.

- In this presentation, we'll dive into the latest findings, exploring trends in programming languages, frameworks, salaries, and workplace preferences. Whether you're a developer, manager, or tech enthusiast, this data gives valuable perspective on how the software world is evolving.

METHODOLOGY

•Data Cleaning
- •Removed incomplete or inconsistent responses
- •Filtered based on relevant variables (e.g., only full-time developers, or by region)

•Categorization
- •Grouped respondents by roles, experience levels, geographic regions, or tech stacks
- •Mapped open-text responses (if any) into categories for analysis

•Descriptive Analysis
- •Used statistical summaries (mean, median, mode) and frequency counts
- •Identified top programming languages, tools, and salary brackets

•Visualization
- •Created graphs, charts, and heatmaps to highlight key patterns
- •Focused on variables with high correlation or notable differences between groups
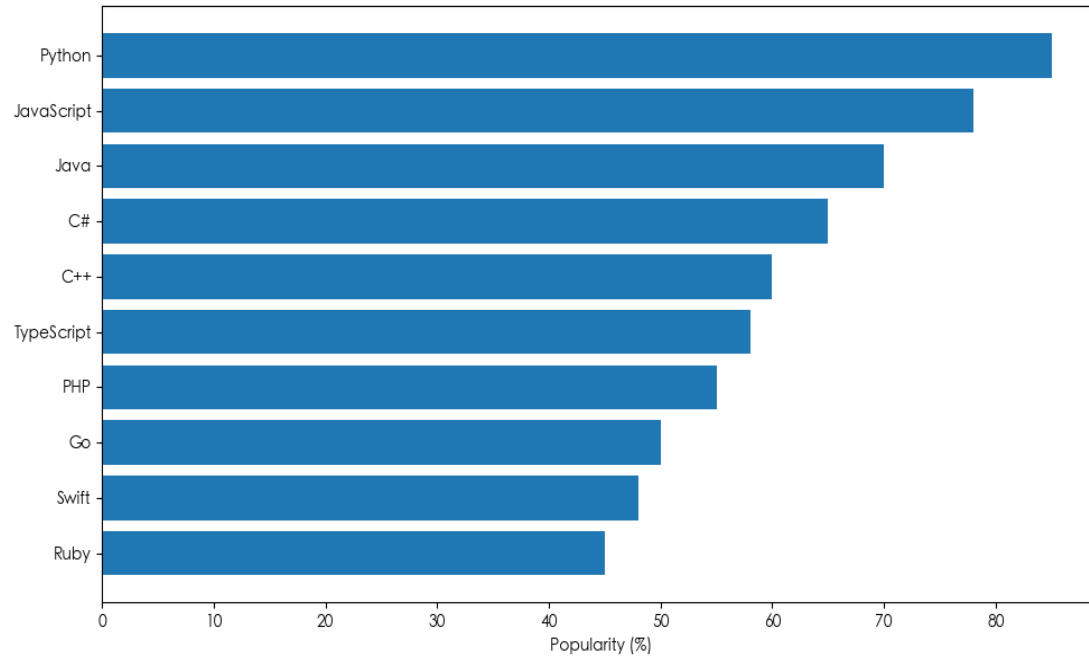
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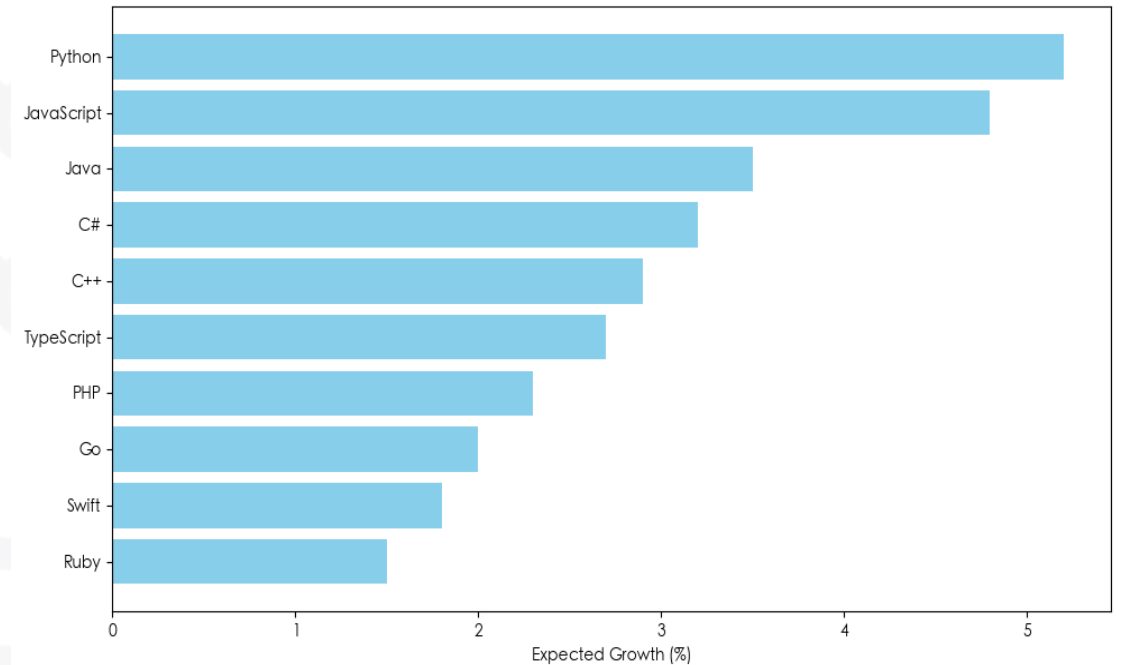# PROGRAMMING LANGUAGE TRENDS

Current Year

Next Year

PROGRAMMING LANGUAGE TRENDS - FINDINGS & IMPLICATIONS

Findings

- JavaScript is the popular language that is used by Developers

- HTML/CSS is the 2nd most popular language used among developers

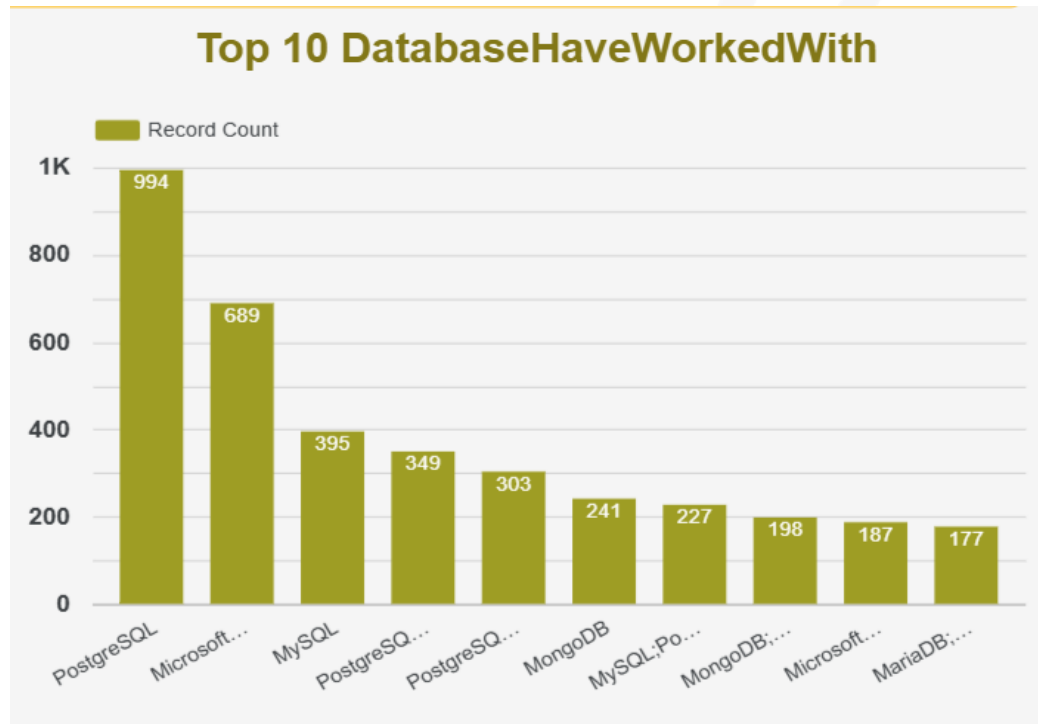- Python is the 3rd most popular language developers have worked with.

Implications

- JavaScript is still popular language that is desired by developers

- Python became 2nd most desired language. It replaces HTML/CSS

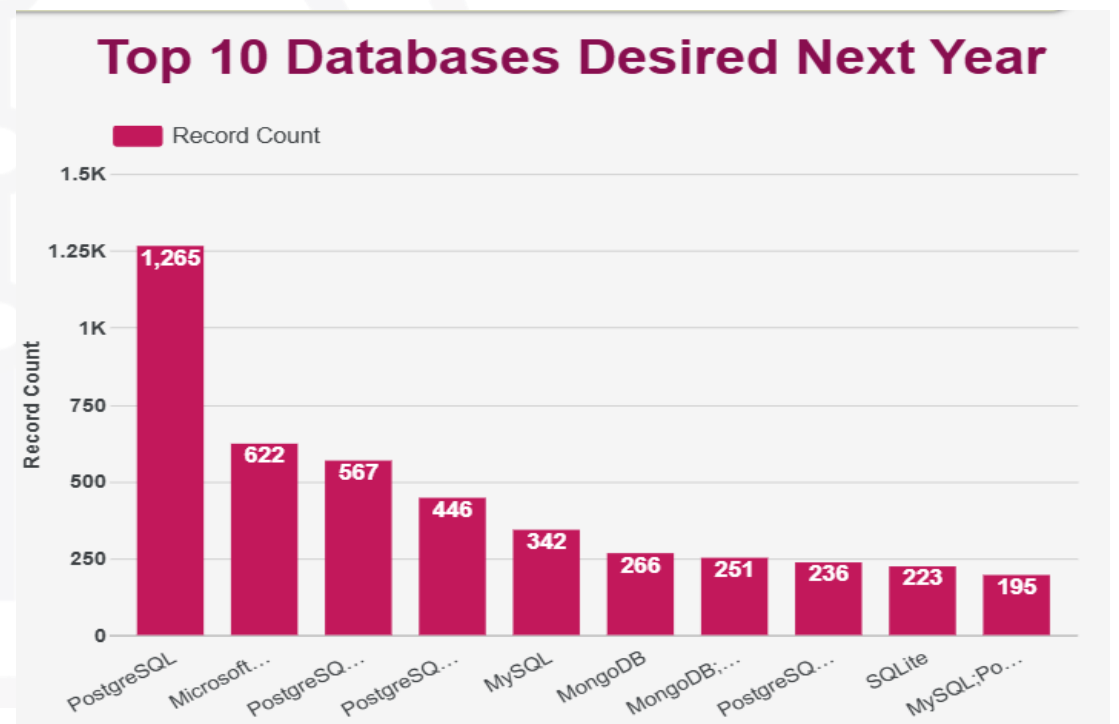- SQL is the 3rd most desired language in future trend of language

DATABASE TRENDS

Current Year

Next Year

Top 10 DatabaseHaveWorkedWith

Record Count

Database	Record Count
PostgreSQL	994
Microsoft...	689
MySQL	395
PostgreSQ...	349
PostgreSQ...	303
MongoDB	241
MySQL;Po...	227
MongoDB;...	198
Microsoft...	187
MariaDB;...	177

Top 10 Databases Desired Next Year

Record Count

Database	Record Count
PostgreSQL	1,265
Microsoft...	622
PostgreSQ...	567
PostgreSQ...	446
MySQL	342
MongoDB	266
MongoDB;...	251
PostgreSQ...	236
SQLite	223
MySQL;Po...	195

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DATABASE TRENDS - FINDINGS & IMPLICATIONS

Findings

- PostgreSQL is the most popular database used and desired by developers

- Microsoft SQL Server is the 2nd most popular database used by developers

- MySQL is the 3rd most popular database used and SQLite is the 2nd most popular desired Database by developers

Implications

- PostgreSQL is still in demand and remains at 1st position

- Microsoft SQL Server is not desired by developers to work with

- SQLite is more desired by developers than MySQL

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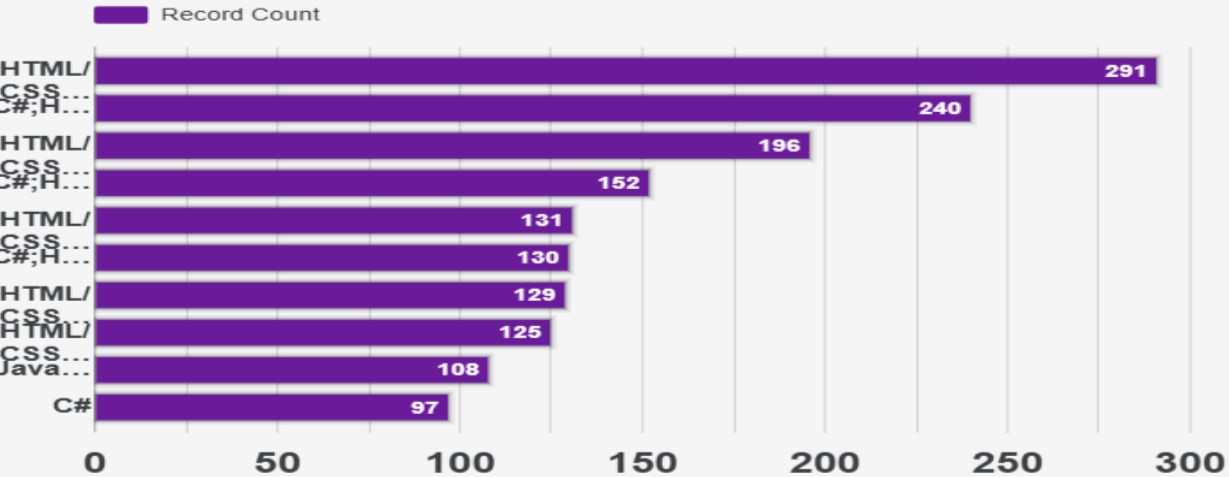
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DASHBOARD

<https://github.com/PreetiArya01/IBM-Capstone-Project--Data-analyst/blob/main/stack_overflow_survey_Report%20(1).pdf>

Current Technology Usage
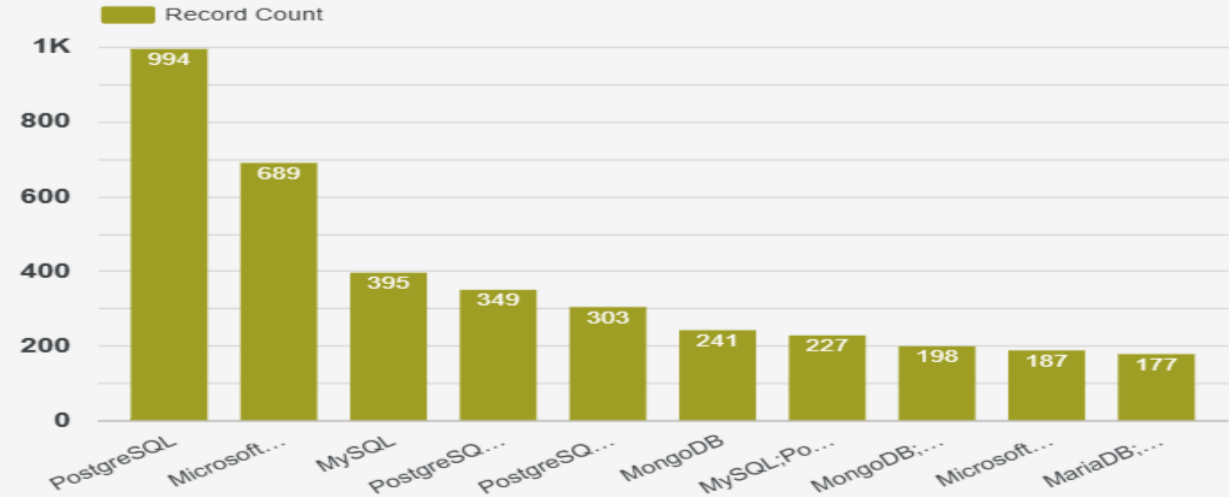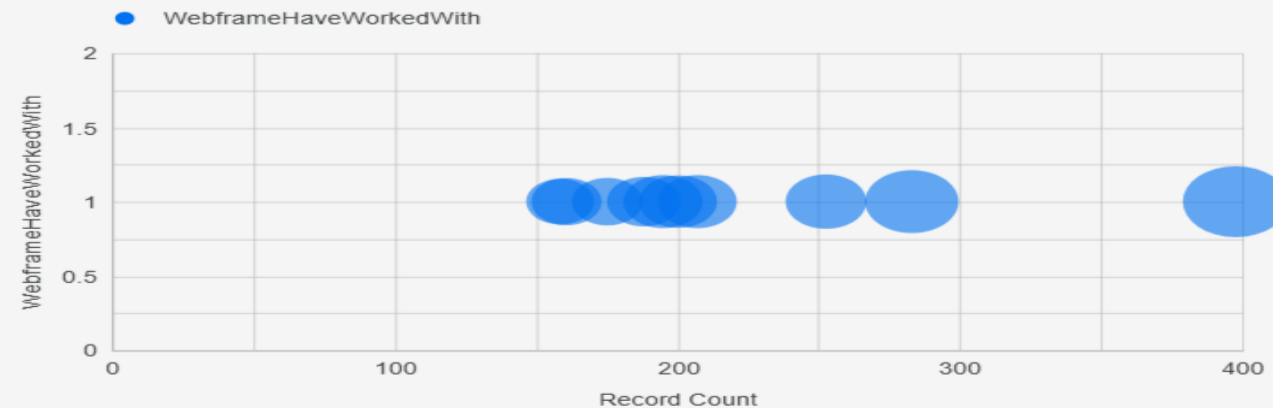
Top 10 LanguageHaveWorkedWith

Record Count

HTML/CSS	291
C#;H...	240
HTML/CSS	196
C#;H...	152
HTML/CSS	131
C#;H...	130
HTML/CSS	129
HTML/CSS	125
Java...	108
C#	97

0   50   100   150   200   250   300

Top 10 DatabaseHaveWorkedWith

Record Count

Database	Count
PostgreSQL	994
Microsoft...	689
MySQL	395
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Microsoft...	187
MariaDB;...	177

Top 10 PlatformHaveWorkedWith

Google Cloud;Netlify
Vercel;VMware
Firebase;VMware
Amazon Web Services (AWS);Cloudflare;Google Cloud
Amazon Web Services (AWS);Google Cloud
Microsoft Azure;VMware
Amazon Web Services (AWS);Digital Ocean;Google Cloud
Amazon Web Services (AWS);Firebase
Alibaba Cloud
Amazon Web Services (AWS);Digital Ocean
Hetzner
Google Cloud
Linode, now Akamai
Hetzner;OVH
Cloudflare;OVH
Digital Ocean;Hetzner
Firebase;Vercel
Google Cloud;Hetzner
Cloudflare;Vercel
Supabase
Firebase;Microsoft Azure
Oracle Cloud Infrastructure (OCI)
Cloudflare
OpenShift
VMware
Netlify;Vercel
OpenStack
Vercel
Render
Digital Ocean;Microsoft Azure
Managed Hosting
Firebase;Google Cloud
Cloudflare;Microsoft Azure
Amazon Web Services (AWS)
Fly.io;Vercel
Digital Ocean
OVH
Firebase;Hetzner
Hetzner;Supabase
Firebase
Databricks;Microsoft Azure
Heroku;OVH
Scaleway;Vercel
Amazon Web Services (AWS);Microsoft Azure
Amazon Web Services (AWS);Cloudflare;Microsoft Azure
Google Cloud;Vercel
OVH;Scaleway
Amazon Web Services (AWS);Digital Ocean;Microsoft Azure
Databricks
Amazon Web Services (AWS);Firebase;Google Cloud;Microsoft Azure
Supabase;Vercel

Top 10 WebFrameHaveWorkedWith.

WebframeHaveWorkedWith

Record Count
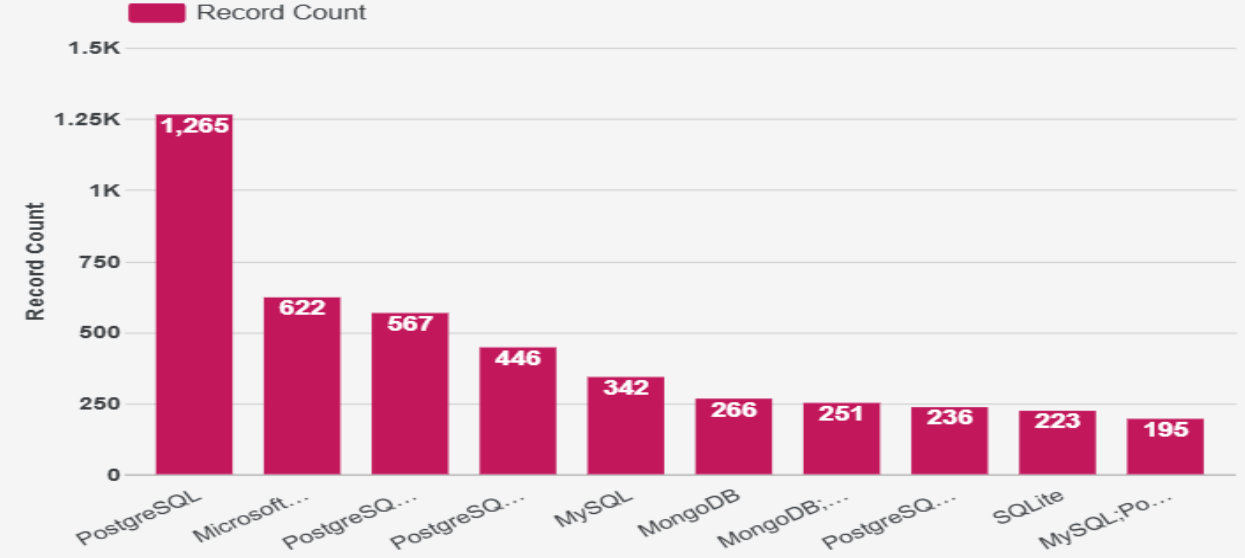
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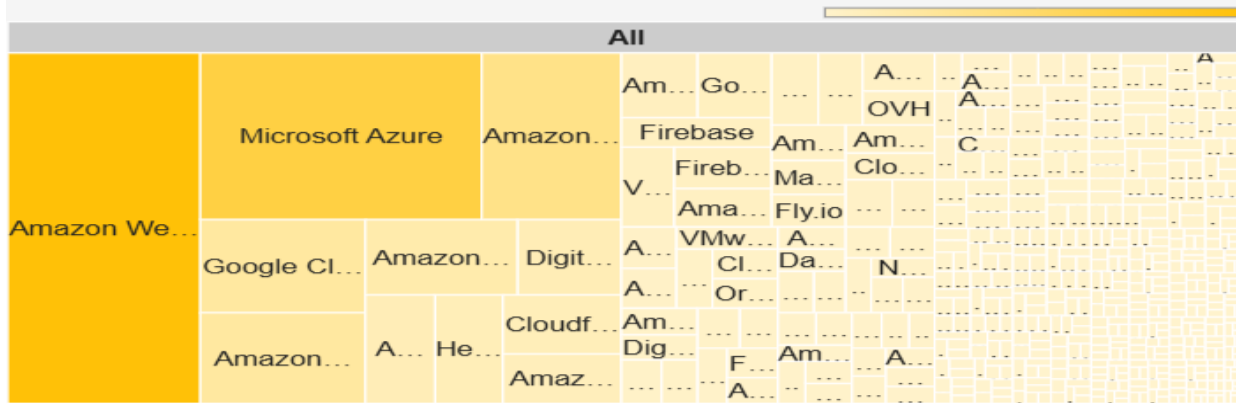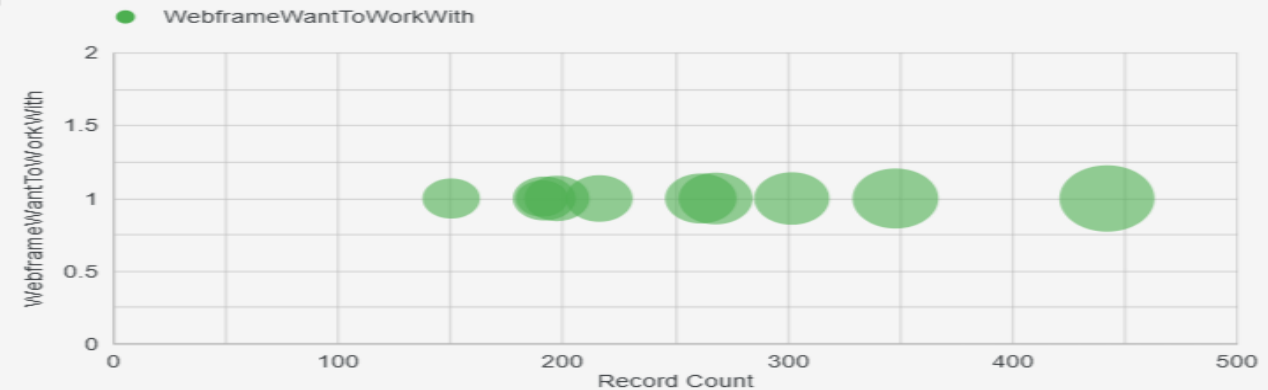# Future Technology Trends

Top 10 Languages Desired Next Year
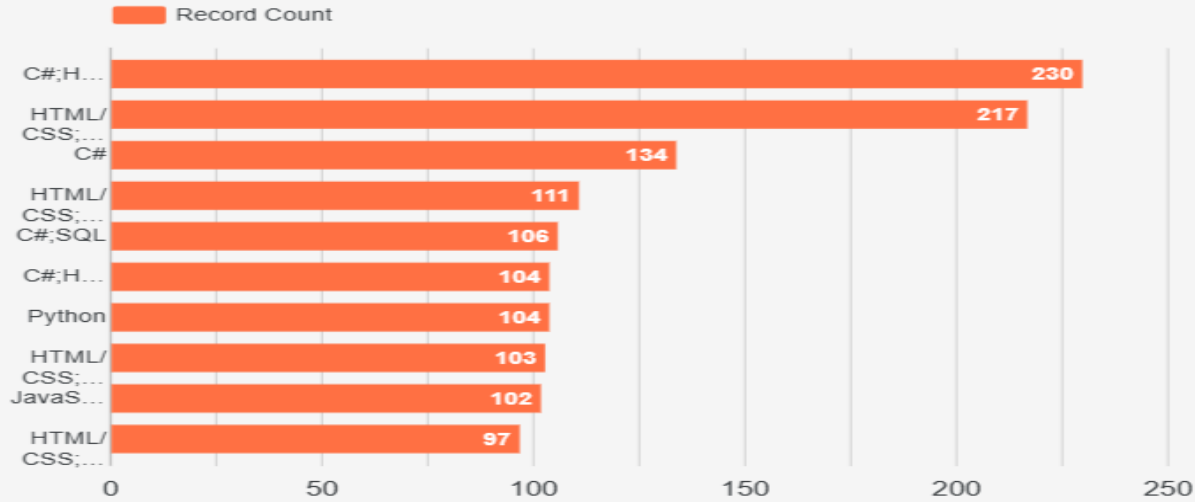
Top 10 Databases Desired Next Year

Top 10 Desired Platforms

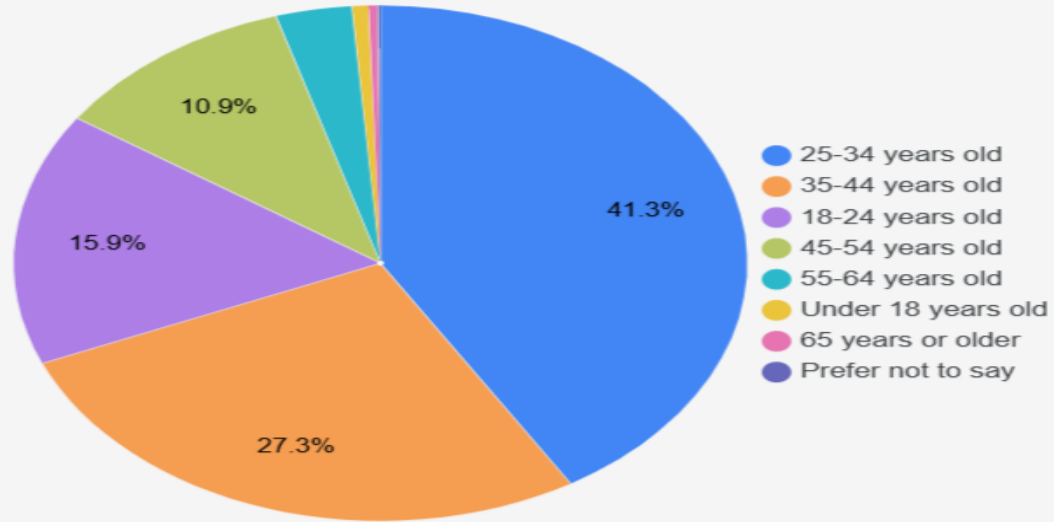## Top 10 Desired Web Frameworks
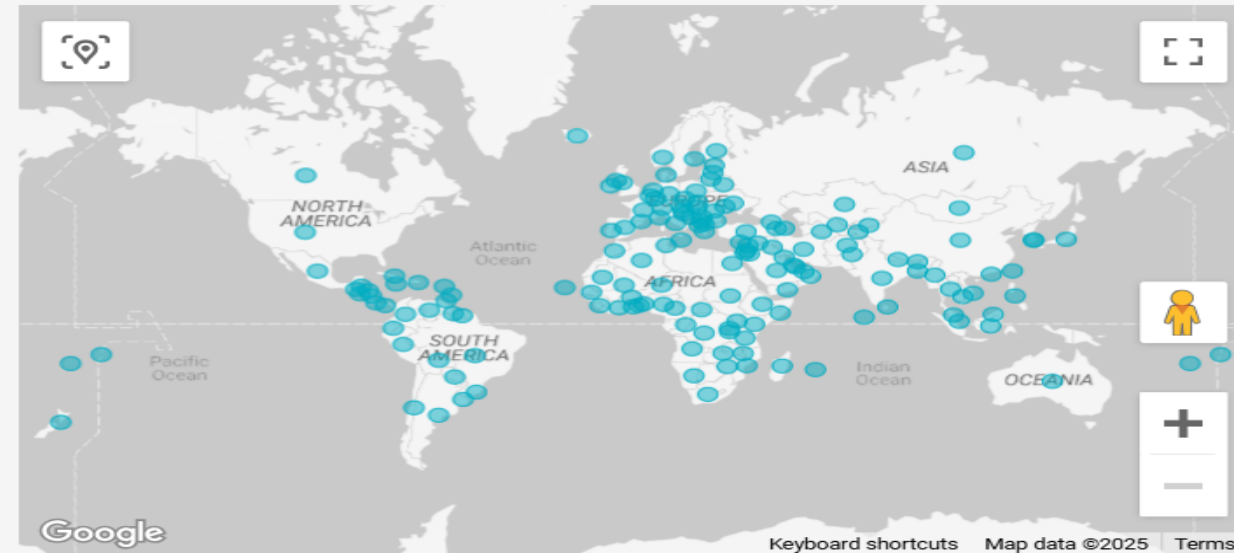

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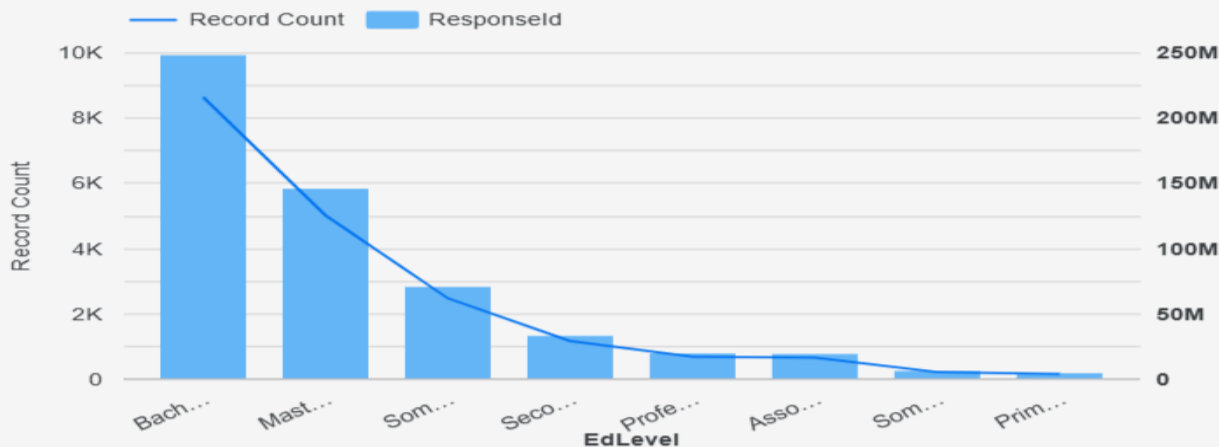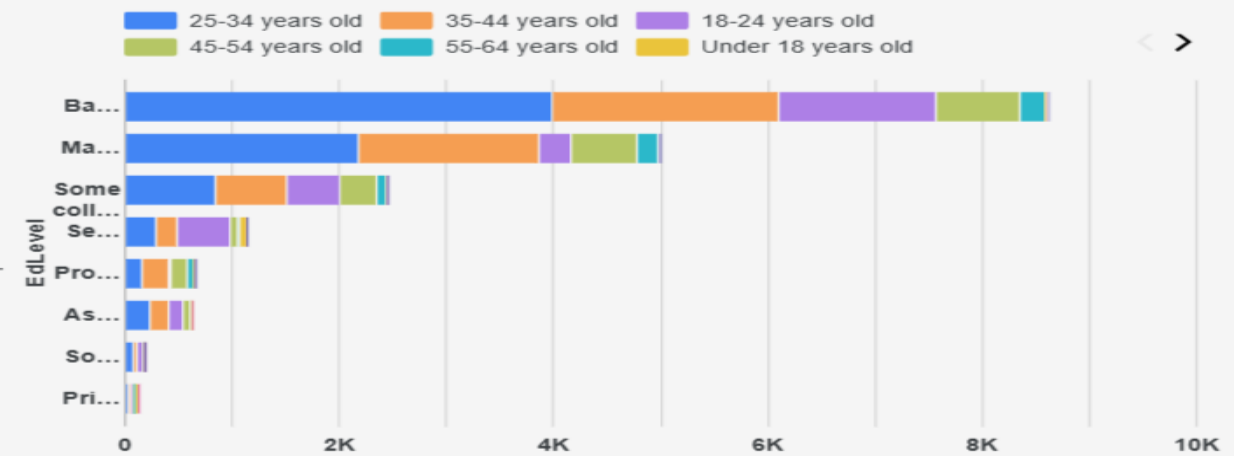
DISCUSSION

- Stack Overflow Developer Survey has revealed that the developers among the whole world have their own preferences in terms of Language, database, platform and webframe.

- Developers choice in language revealed that front end developers are much more in numbers.

OVERALL FINDINGS & IMPLICATIONS

Findings

- The most Desired and already used language is the same.
- The most desired and already used database is the same.
- The most desired and used platform is also the same that is 'AWS'.

Implications

- If the desired and already functioning language, platform, database, and web framework are the same, it will certainly promote both individual and collective goals of the industry and its workforce.
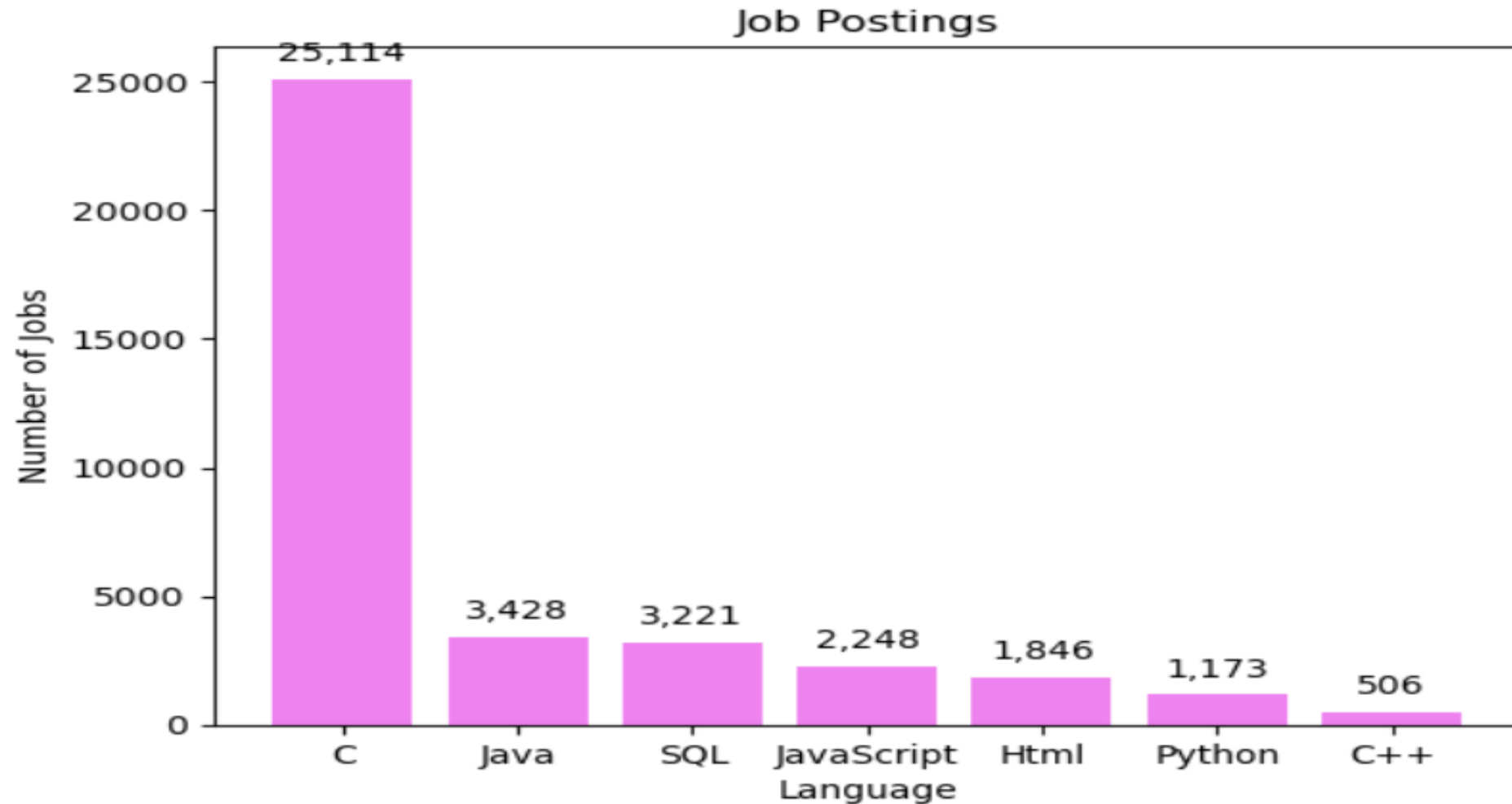
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CONCLUSION

- The most Desired and already used language is the same.

- The most desired and already used database is the same.

- The most desired and used platform is also the same that is 'AWS'.

- The most desired and used webframe are also similar that is 'Spring boot','REACT'

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JOB POSTINGS

POPULAR LANGUAGES

programming language and average annual salary '(in Dollars)'

Language	Salary
Swift	$130,801
Python	$114,383
C++	$113,865
Javascript	$110,981
Java	$101,013
Go	$94,082
R	$92,037
C#	$88,726
SQL	$84,793
PHP	$84,727