IT Trends

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OUTLINE

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EXECUTIVE SUMMARY

- Over 10k entries to identify the trend of the industry
- Most commonly used
    - Language: JavaScript
    - Database: MongoDB
    - Web Frame: React.js
- Most desired to work with next year:
    - Language: JavaScript
    - Database: PostgreSQL
    - Web Frame: React.js
- Overwhelmingly male respondent base
- Overwhelmingly American respondent base

INTRODUCTION

- Thousands of respondents from across the world
- Technologies currently used were asked:
  - Language
  - Database
  - Web Frame
  - Operating System
- Technologies to be used next year
- Comparison
  - Present and Future
  - By multiple metrics

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METHODOLOGY

- Web Scraped data using Python

- Exploring the data using SQLite and Python

- Cleaning the data for use

- Visualization of Data
  - Google Looker Studio
  - SQLite, Pandas and Seaborn Libraries from Python

RESULTS

There seems to be little shift in the use of any technology with the only one to present a noticeable change being databases with PostgreSQL overtaking MongoDB.

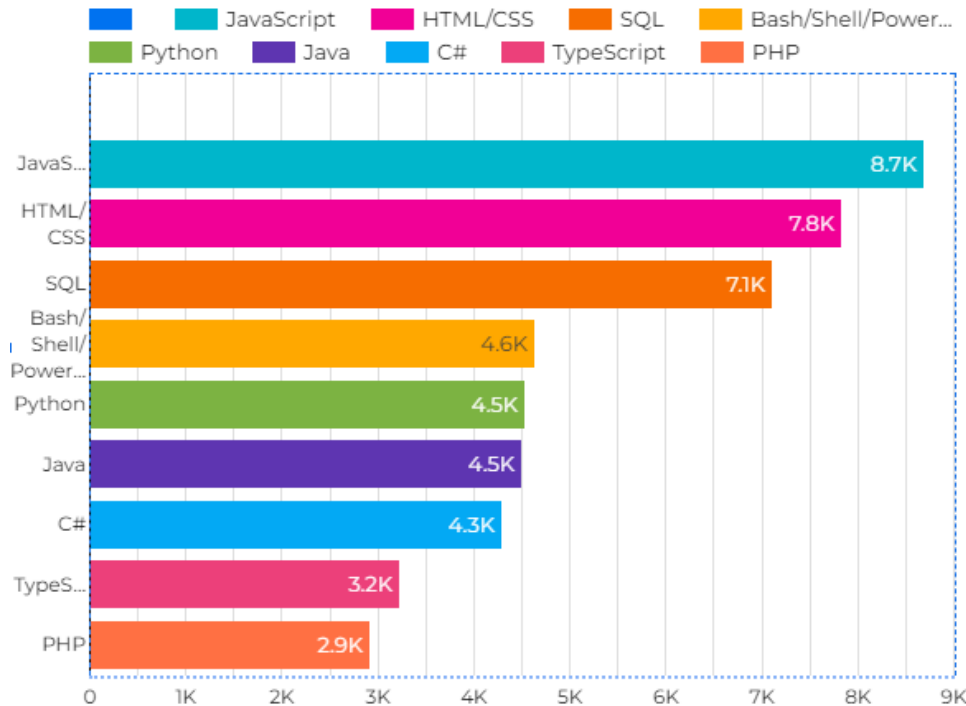We can see a predominantly male respondent base primarily from the U.S.

We can see the use of Windows, Linux and MacOS still retain the top 3 most used operating Systems.

We were able to gather better insight on the it industry's professionals.

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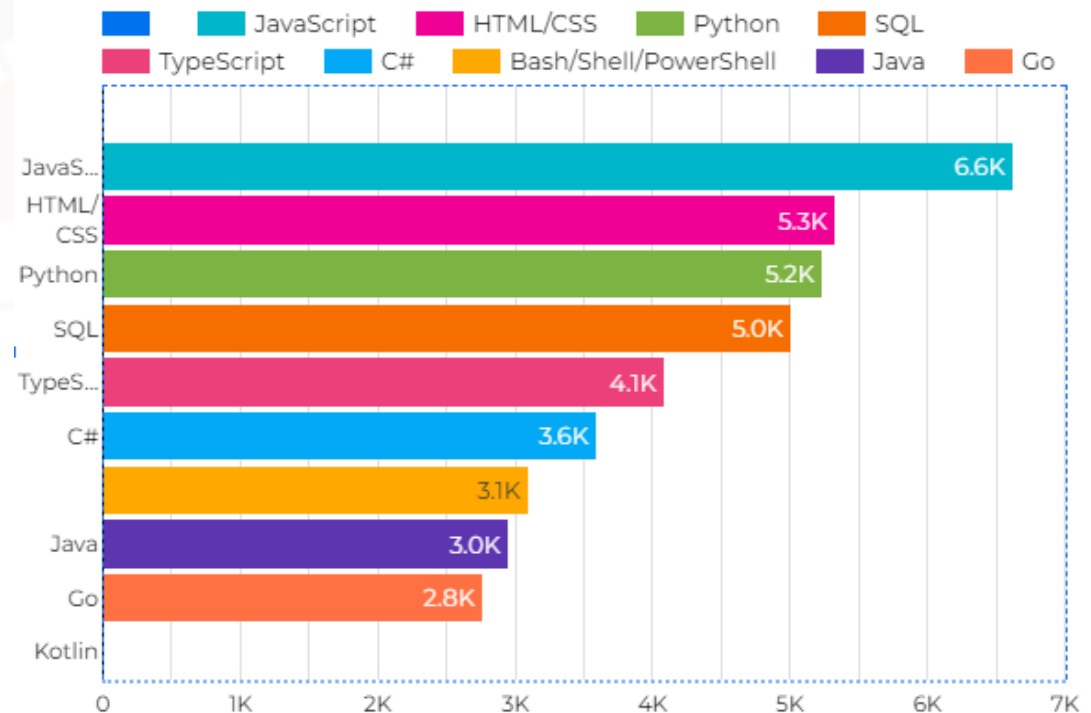
PROGRAMMING LANGUAGE TRENDS

Current Year

Top 10 Language Used

Legend: JavaScript, HTML/CSS, SQL, Bash/Shell/Power…, Python, Java, C#, TypeScript, PHP

Language	Value
JavaS…	8.7K
HTML/CSS	7.8K
SQL	7.1K
Bash/Shell/Power…	4.6K
Python	4.5K
Java	4.5K
C#	4.3K
TypeS…	3.2K
PHP	2.9K

Next Year

Top 10 Languages for Next Year

Legend: JavaScript, HTML/CSS, Python, SQL, TypeScript, C#, Bash/Shell/PowerShell, Java, Go

Language	Value
JavaS…	6.6K
HTML/CSS	5.3K
Python	5.2K
SQL	5.0K
TypeS…	4.1K
C#	3.6K
Bash/Shell/PowerShell	3.1K
Java	3.0K
Go	2.8K
Kotlin	

PROGRAMMING LANGUAGE TRENDS - FINDINGS & IMPLICATIONS

Findings

- JavaScript remains at the top though with decrease in popularity
- Increased interest in non-web languages
- Go seems to be garnering interest quickly
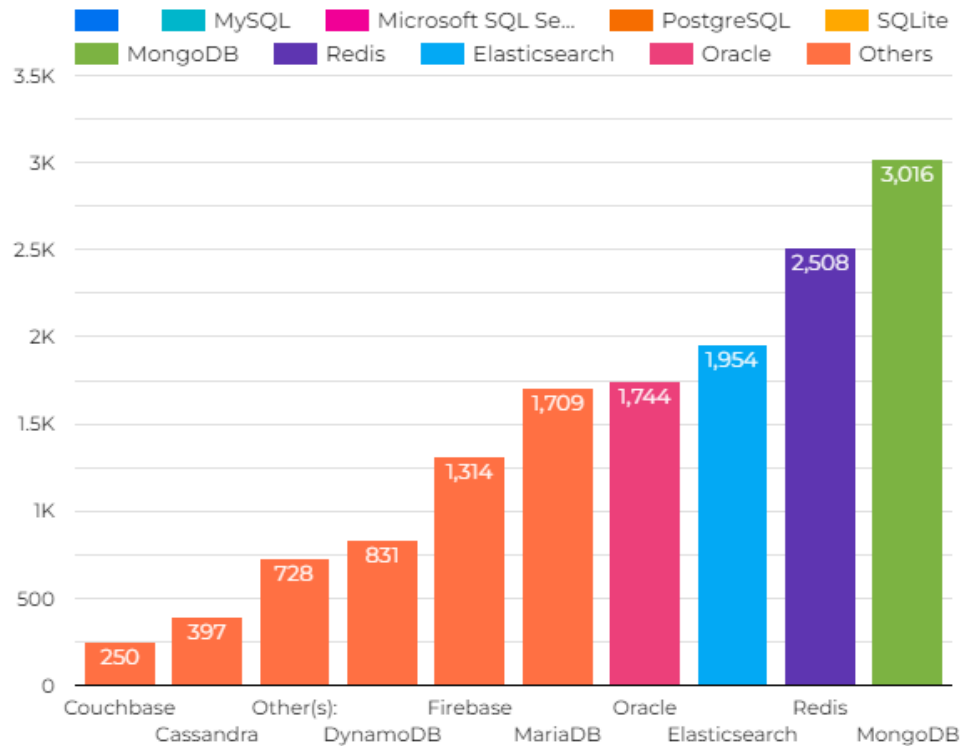
Implications

- The overall distribution of languages seems stable
- Interest in web development seems to be cooling down
- There is an interest in new languages/ engagement with new versions of existent ones

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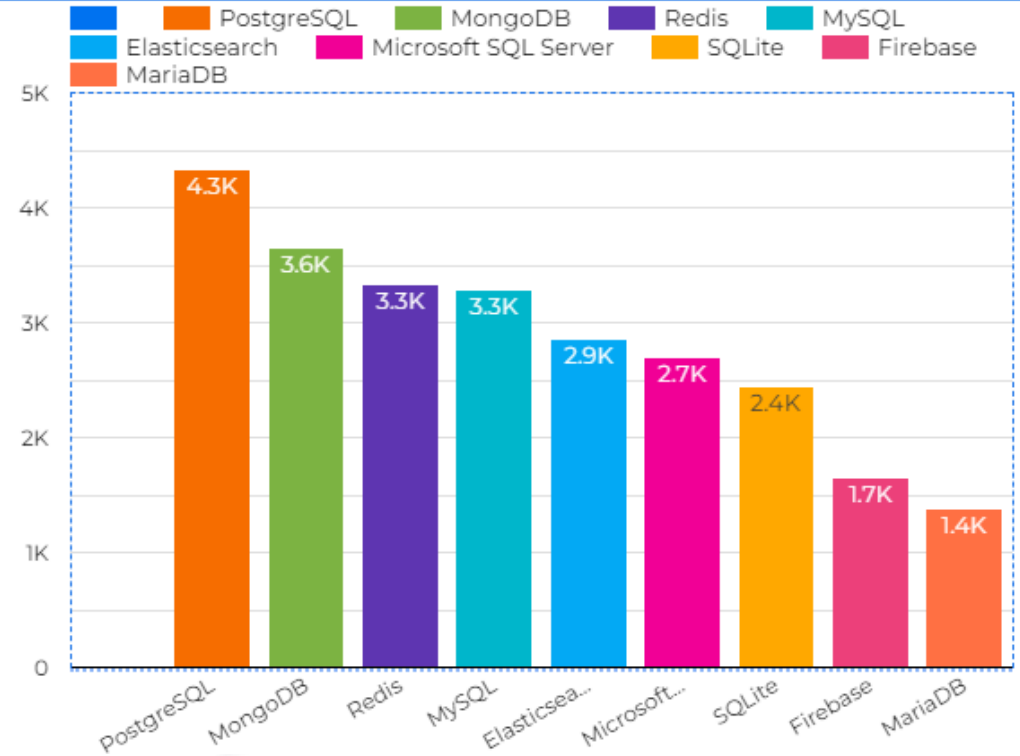SKILLS NETWORK

DATABASE TRENDS

Current Year

Top 10 Database

Legend: MySQL, Microsoft SQL Se..., PostgreSQL, SQLite, MongoDB, Redis, Elasticsearch, Oracle, Others

- Couchbase: 250
- Cassandra: 397
- Other(s): 728
- DynamoDB: 831
- Firebase: 1,314
- MariaDB: 1,709
- Oracle: 1,744
- Elasticsearch: 1,954
- Redis: 2,508
- MongoDB: 3,016

Next Year

Top 10 Databases for Next Year

Legend: PostgreSQL, MongoDB, Redis, MySQL, Elasticsearch, Microsoft SQL Server, SQLite, Firebase, MariaDB

- PostgreSQL: 4.3K
- MongoDB: 3.6K
- Redis: 3.3K
- MySQL: 3.3K
- Elasticsea...: 2.9K
- Microsoft...: 2.7K
- SQLite: 2.4K
- Firebase: 1.7K
- MariaDB: 1.4K

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DATABASE TRENDS - FINDINGS & IMPLICATIONS

Findings

- PostgreSQL overtakes MongoDB in the projection

- SQLite seems to have lost the most in the prediction

- Little change overall

Implications

- The userbase of established databases are very stable

- Renewed interest in PostgreSQL can be due to a recent or near update

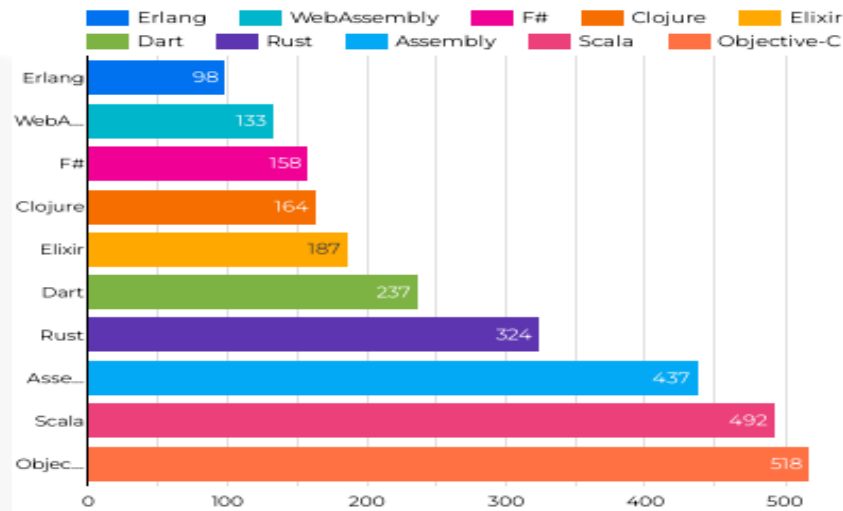- Databases with a small userbase seem to be migrating to bigger ones

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DASHBOARD

GitHub link to Google Looker Dashboard pdf

GitHub link to the full project

DASHBOARD TAB 1

Top 10 Language Used

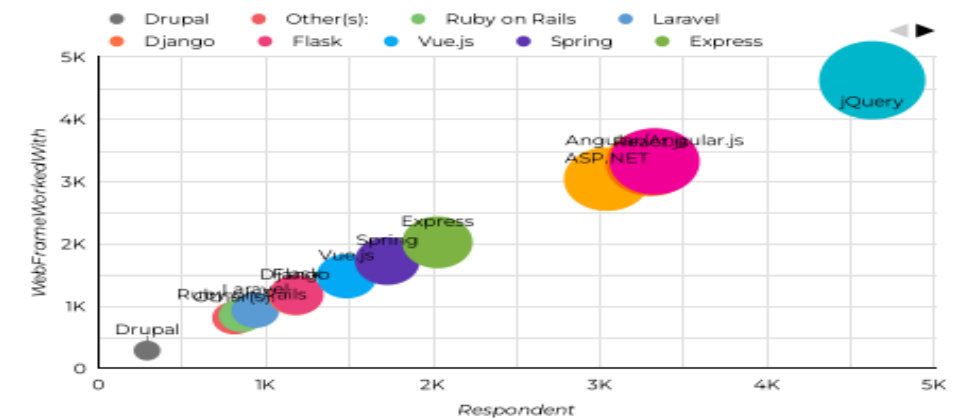| Language	Value
Erlang	98
WebA_	133
F#	158
Clojure	164
Elixir	187
Dart	237
Rust	324
Asse_	437
Scala	492
Objec_	518

Legend: Erlang, WebAssembly, F#, Clojure, Elixir, Dart, Rust, Assembly, Scala, Objective-C

Top 10 Database

Database	Value
Couchbase	250
Cassandra	397
Other(s):	728
DynamoDB	831
Firebase	1,314
MariaDB	1,709
Oracle	1,744
Elasticsearch	1,954
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MongoDB	3,016

Legend: Couchbase, Cassandra, Other(s):, DynamoDB, Firebase, MariaDB, Oracle, Elasticsearch, Redis, Others

Most Used Platforms

Docker, Android, Windows, MacOS, Kubernetes, WordPress, Arduino, IBM Cloud or Watson, Raspberry Pi, Heroku, iOS, Linux, Slack, Google Cloud Platform, Microsoft Azure, AWS, Other(s):

Most Used WebFrames

Legend: Drupal, Other(s):, Ruby on Rails, Laravel, Django, Flask, Vue.js, Spring, Express

jQuery, Angular/Angular.js, ASP.NET, Express, Spring, Vue.js, Django, Laravel, Ruby on Rails, Drupal

Axis: WebFrameWorkedWith (y), Respondent (x)

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DASHBOARD TAB 2

Top 10 Languages for Next Year

Legend: JavaScript, HTML/CSS, Python, SQL, TypeScript, C#, Bash/Shell/PowerShell, Java, Go

- JavaS_ : 6.6K
- HTML/CSS : 5.3K
- Python : 5.2K
- SQL : 5.0K
- TypeS_ : 4.1K
- C# : 3.6K
- (Bash/Shell/PowerShell) : 3.1K
- Java : 3.0K
- Go : 2.8K
- Kotlin

Top 10 Databases for Next Year

Legend: PostgreSQL, MongoDB, Redis, MySQL, Elasticsearch, Microsoft SQL Server, SQLite, Firebase, MariaDB

- PostgreS... : 4.3K
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- Microsoft... : 2.7K
- SQLite : 2.4K
- Firebase : 1.7K
- MariaDB : 1.4K
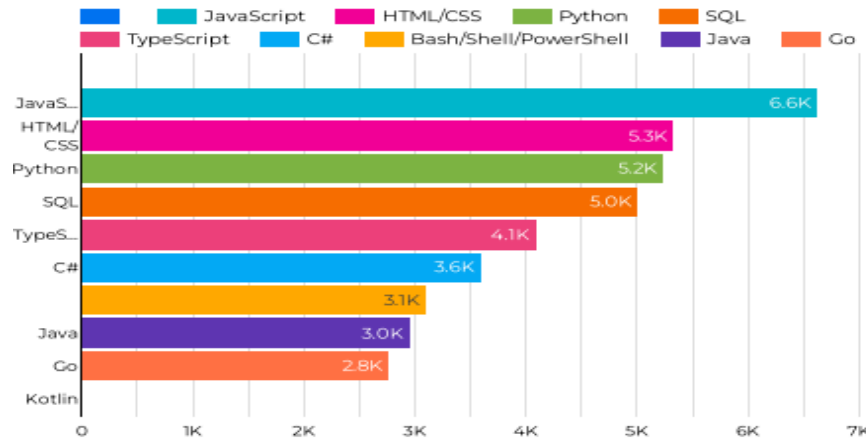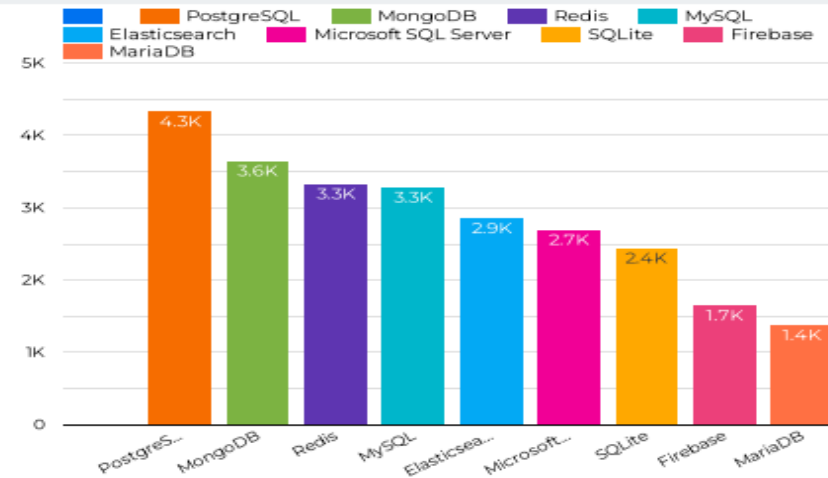
Platform Desire for Next Year

- Linux
- AWS
- Docker
- Windows
- Android
- Kubernetes
- Google Cloud Platfo...
- Slack
- MacOS
- Raspberry Pi
- iOS
- Microso...
- Arduino
- Heroku
- WordP...
- IBM CL...
- Other(...
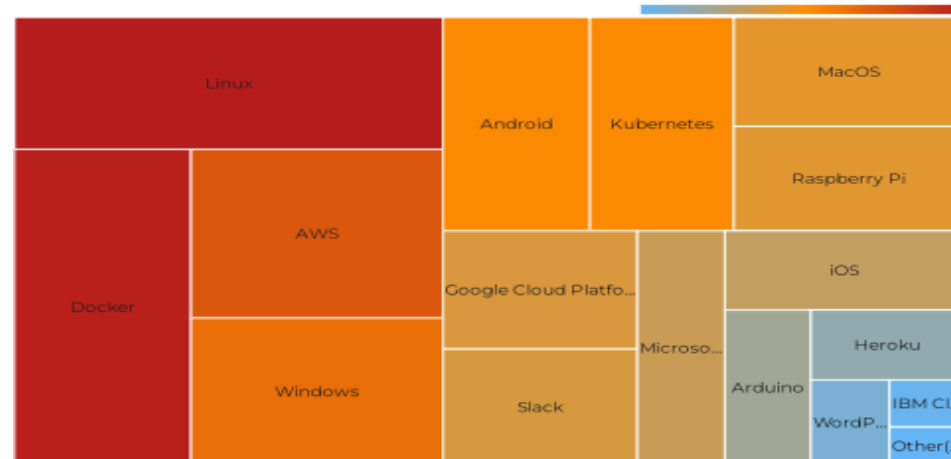
Most Deisred WebFrames for Next Year
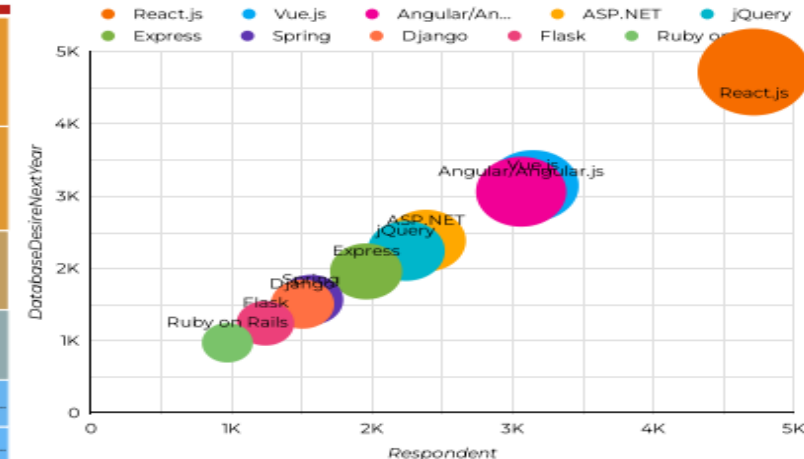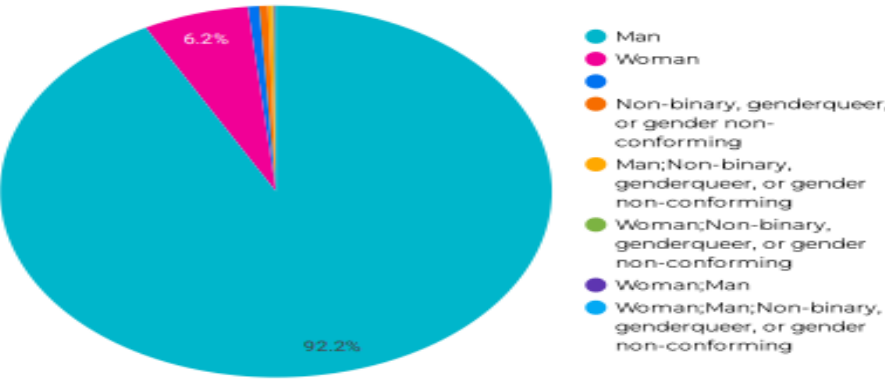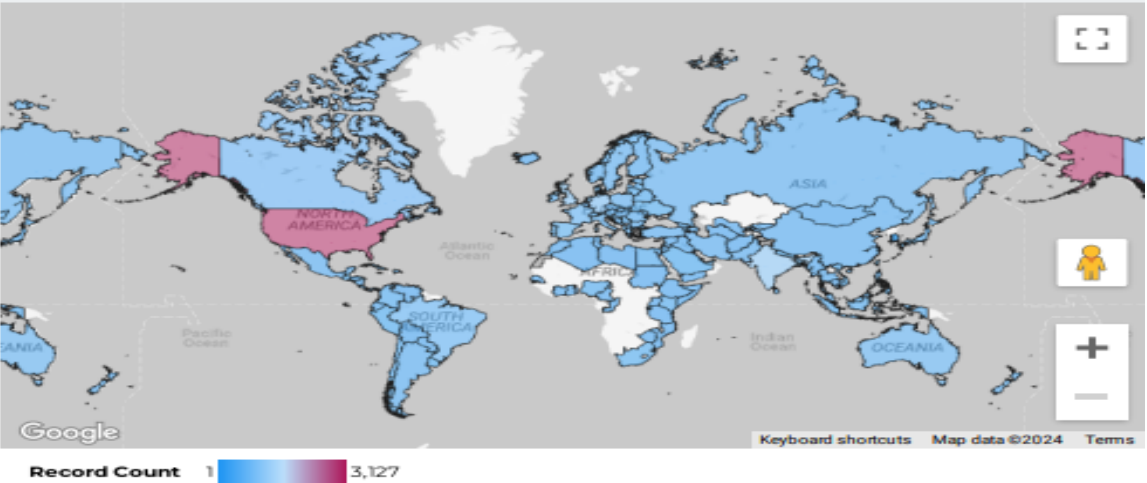
Legend: React.js, Vue.js, Angular/An..., ASP.NET, jQuery, Express, Spring, Django, Flask, Ruby o...

Axes: DatabaseDesireNextYear (y), Respondent (x)

- React.js
- Vue.js
- Angular/Angular.js
- ASP.NET
- jQuery
- Express
- Django
- Spring
- Flask
- Ruby on Rails

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DASHBOARD TAB 3
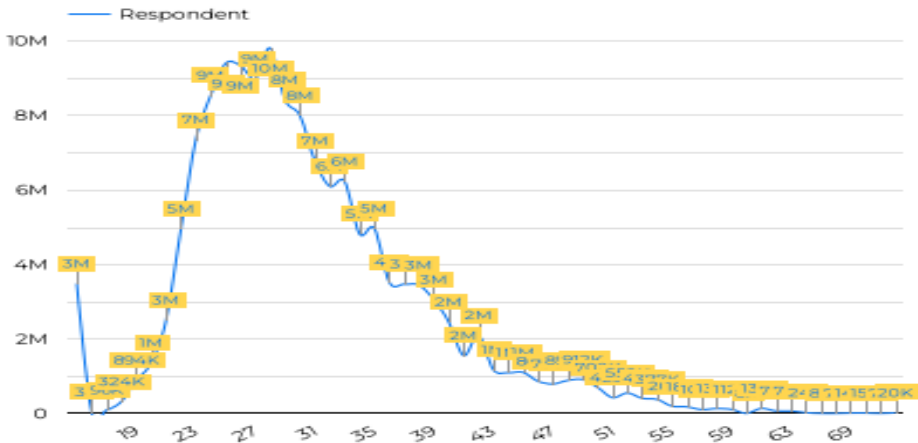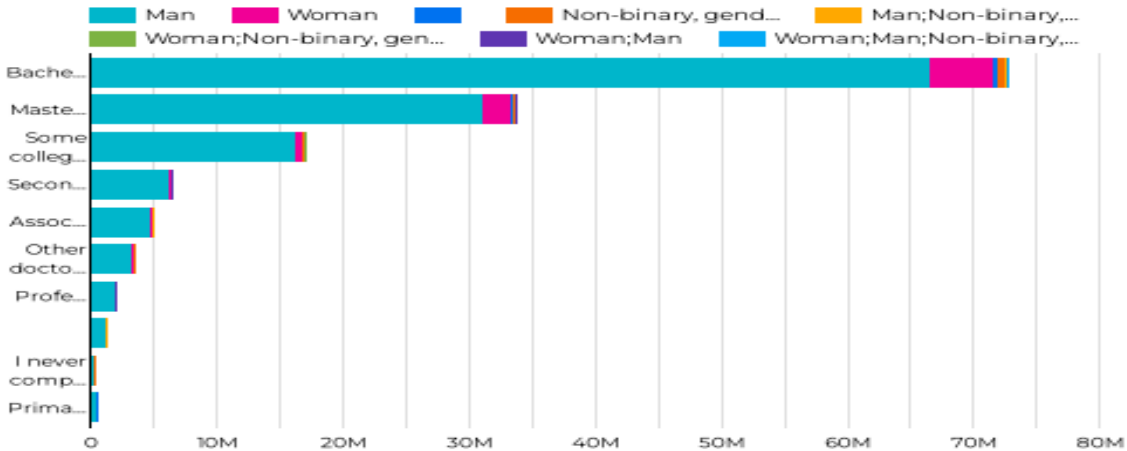
DISCUSSION

- For future reference we should review our data gathering methods to ensure that the respondents' gender ratio is a reflection of the industry, not of flawed gathering method

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OVERALL FINDINGS & IMPLICATIONS

Findings

- Predominantly young male respondent base from the U.S with a bachelor's or master degree
- Stability in the use of technology with a slight shift to more popular technologies
- We can see that there is a healthy influx and interest on the industry

Implications

- A young demographic with a continuous interest on the industry
- A cycle of more popular tool gets more support and thus gets more popular may be happening
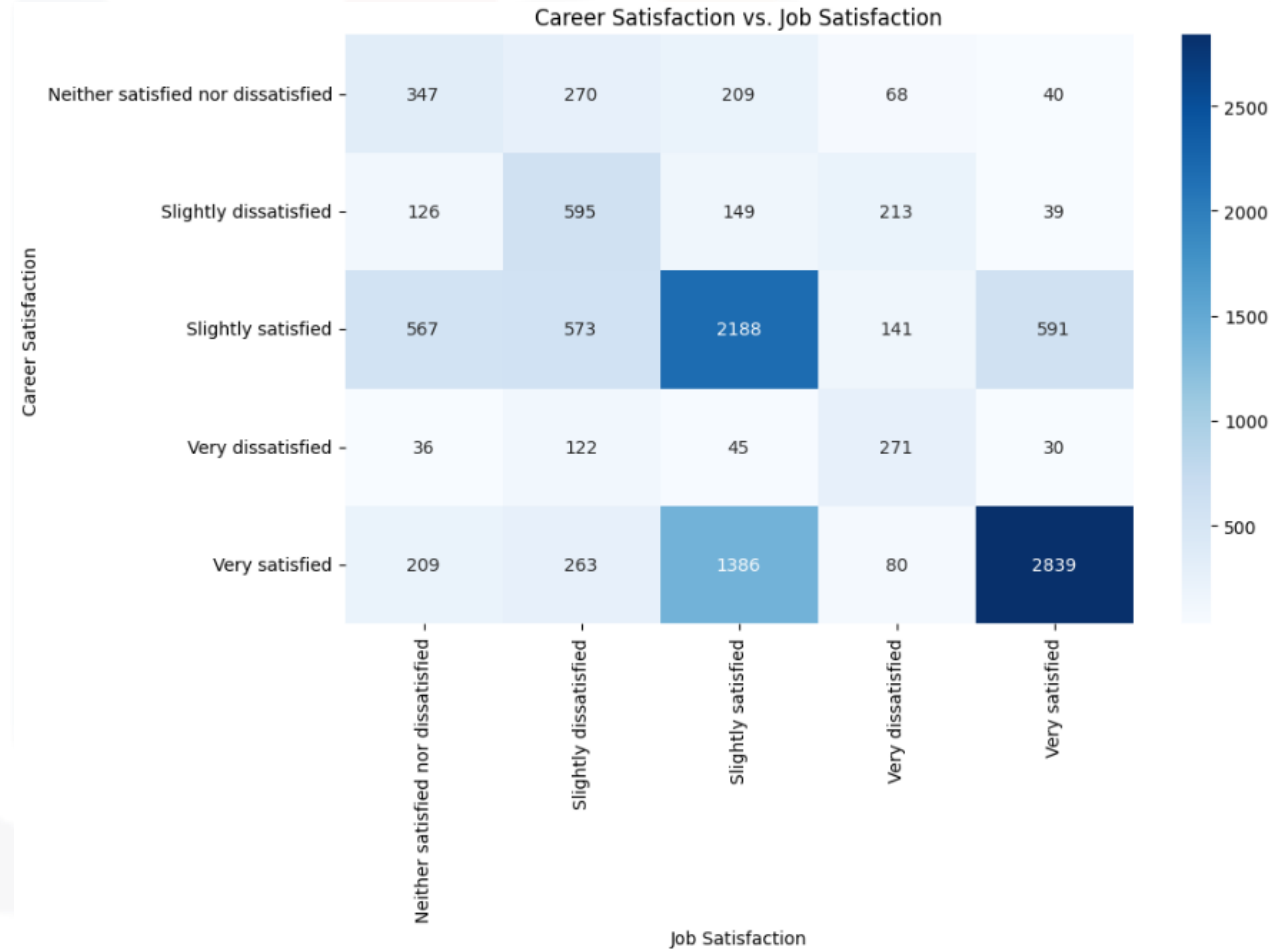- The use of more customizable platforms like Linux and Docker seem to be prefered
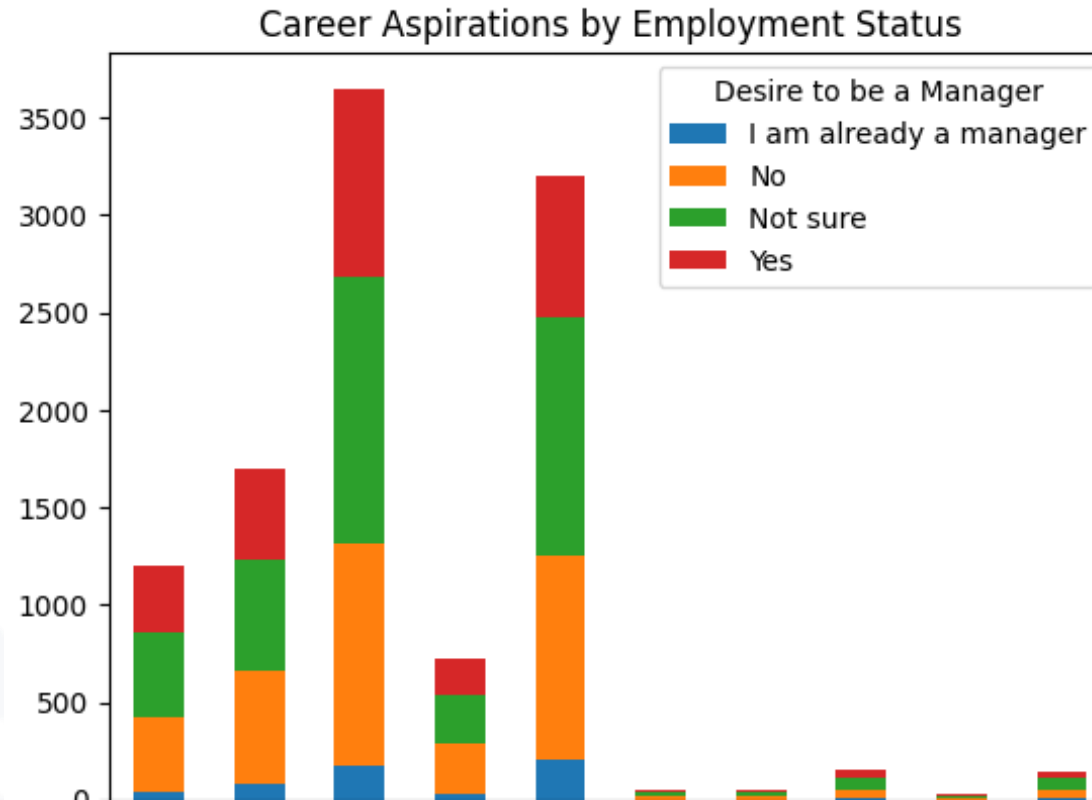
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CONCLUSION

- The respondent base is high from across the world indicating a universality to the trend

- A young respondent base with ages from 23 to 31 who are engaging with the subject indicates a healthy amount of professionals entering the industry

- There seems to be a preference for customizability for professionals when it comes to platform use

- With more refined data we will be able to get a more definite picture of the industry but even now we can get a good view of the pattern of behavior
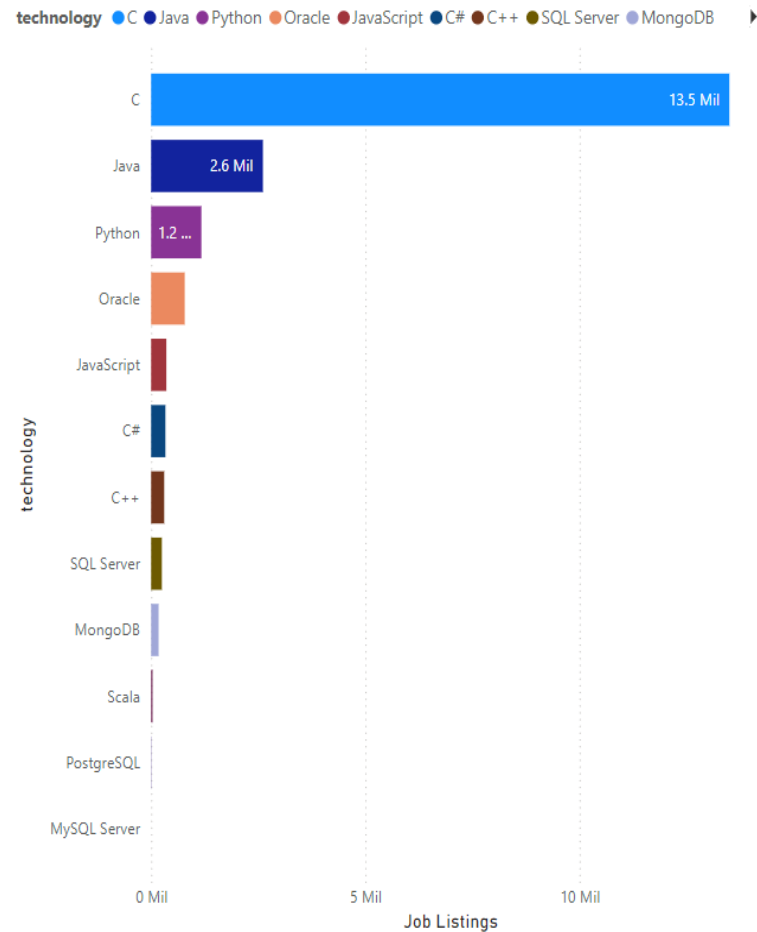
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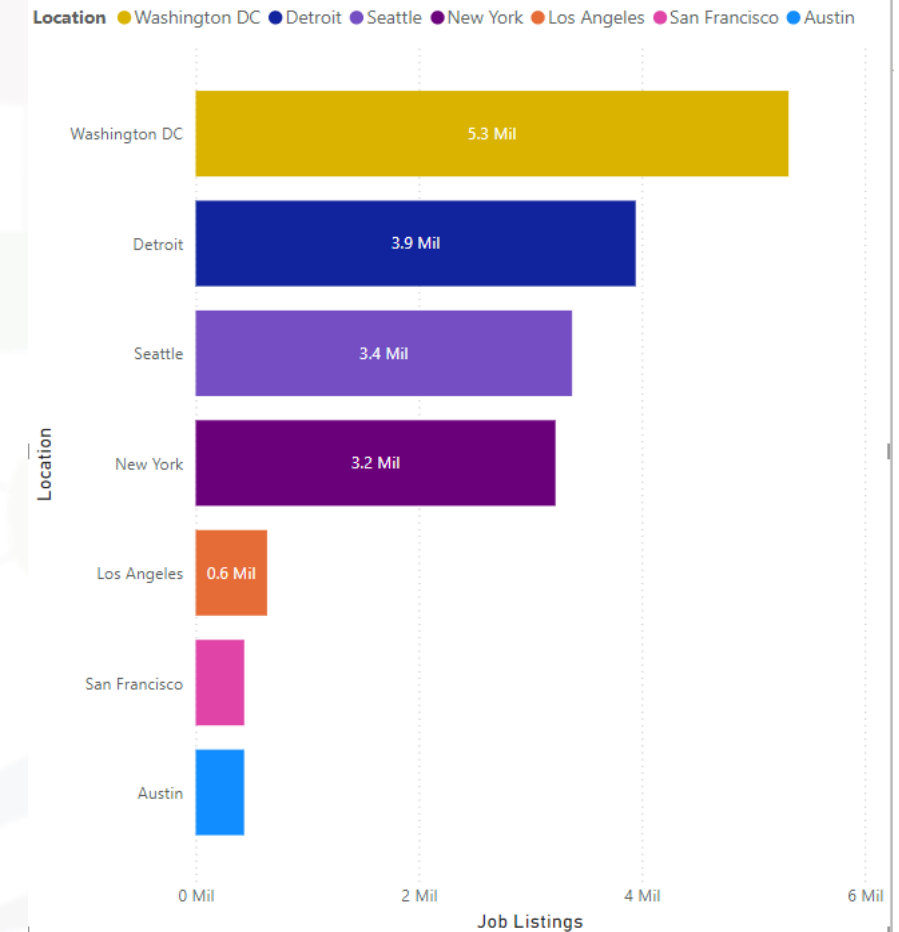**SKILLS NETWORK**

APPENDIX

Career Satisfaction vs. Job Satisfaction

APPENDIX

Career Aspirations by Employment Status

JOB POSTINGS

Job Listings por technology e technology

technology • C • Java • Python • Oracle • JavaScript • C# • C++ • SQL Server • MongoDB ▶

technology	Job Listings
C	13.5 Mil
Java	2.6 Mil
Python	1.2 ...
Oracle	
JavaScript	
C#	
C++	
SQL Server	
MongoDB	
Scala	
PostgreSQL	
MySQL Server	

Job Listings por Location e Location

Location • Washington DC • Detroit • Seattle • New York • Los Angeles • San Francisco • Austin

Location	Job Listings
Washington DC	5.3 Mil
Detroit	3.9 Mil
Seattle	3.4 Mil
New York	3.2 Mil
Los Angeles	0.6 Mil
San Francisco	
Austin	

POPULAR LANGUAGES