TECHNOLOGY TRENDS ANALYSIS

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OUTLINE

- Executive Summary
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- Methodology
- Results
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  - Dashboard
- Discussion
  - Findings & Implications
- Conclusion
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EXECUTIVE SUMMARY

The following slides summarize key findings from an analysis of data collected as part of the 2019 Stack Overflow Developer Survey.

The analysis yielded insights regarding the following:

- Most popular languages, databases, and other technologies (at the time of data collection)
- Attitudes reflecting which technologies will become most popular in the future
- Demographics (e.g., the gender gap among developers)

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INTRODUCTION

- Analyze technology trend in software and web development among developers around the world

- In this analysis, a subset of the 2019 dataset was examined (present dataset: N = 11, 398; original dataset N ≈ 90,000)

- Audience for this Presentation
  - Programmers
  - Computer Science Students
  - HR Professionals

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METHODOLOGY

- Data Collection (Sources)
  - Stack overflow developer 2019 survey
  - GitHub job postings
  - Programming languages annual salary
- Data Wrangling
- Data Exploration
- Data Cleaning
- Data Visualization
 - Python matplotlib & turtle
  - IBM Cognos

RESULTS

	Respondent	LanguageWorkedWith	LanguageDesireNextYear	DatabaseWorkedWith	DatabaseDesireNextYear	PlatformWorkedWith
0	4	C	C	MySQL	MySQL	Linux
1	4	C++	C#	SQLite	SQLite	Windows
2	4	C#	JavaScript	NaN	NaN	NaN
3	4	Python	SQL	NaN	NaN	NaN
4	4	SQL	NaN	NaN	NaN	NaN
...	...	...	...	...	...	...
74584	25142	Go	Python	NaN	NaN	NaN
74585	25142	HTML/CSS	R	NaN	NaN	NaN
74586	25142	PHP	NaN	NaN	NaN	NaN
74587	25142	Python	NaN	NaN	NaN	NaN
74588	25142	R	NaN	NaN	NaN	NaN

PROGRAMMING LANGUAGE TRENDS

Current Year
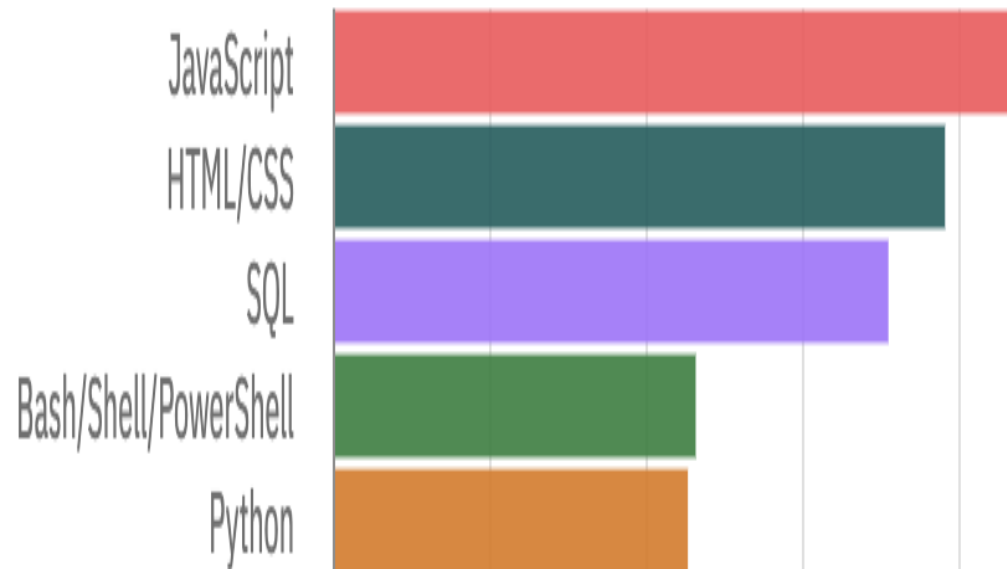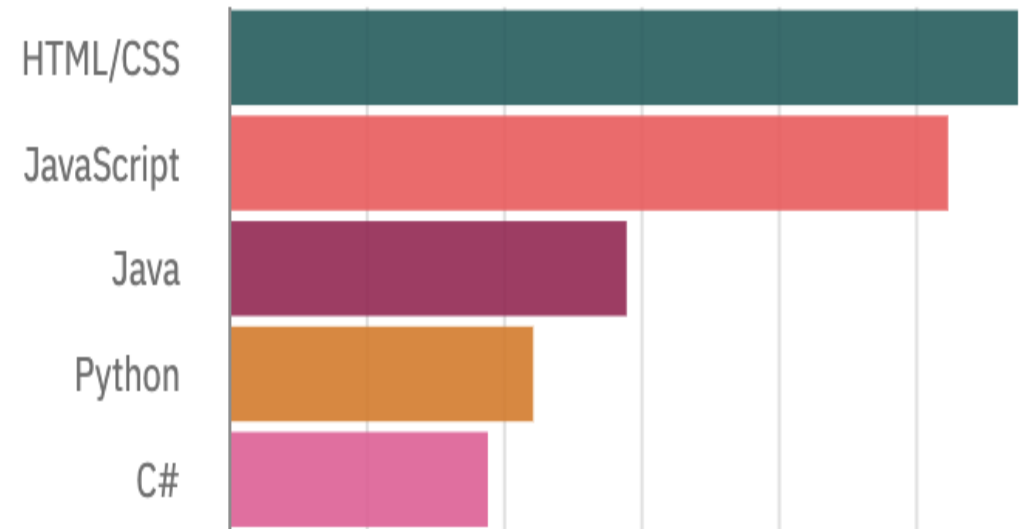
Next Year

PROGRAMMING LANGUAGE TRENDS - FINDINGS & IMPLICATIONS
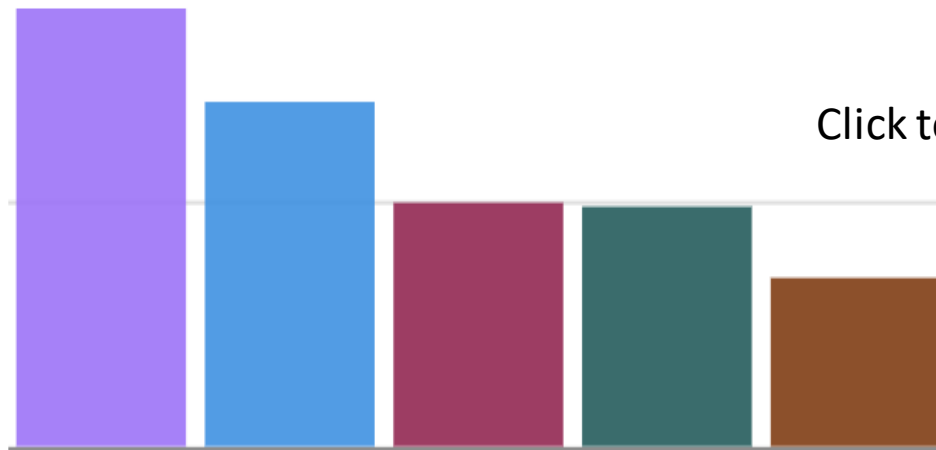
Findings

- JavaScript is top programming language

- Python becoming popular programming language next year

- HTML/CSS still has great portion in language usage trend

Implications

- Web Development is still high demand

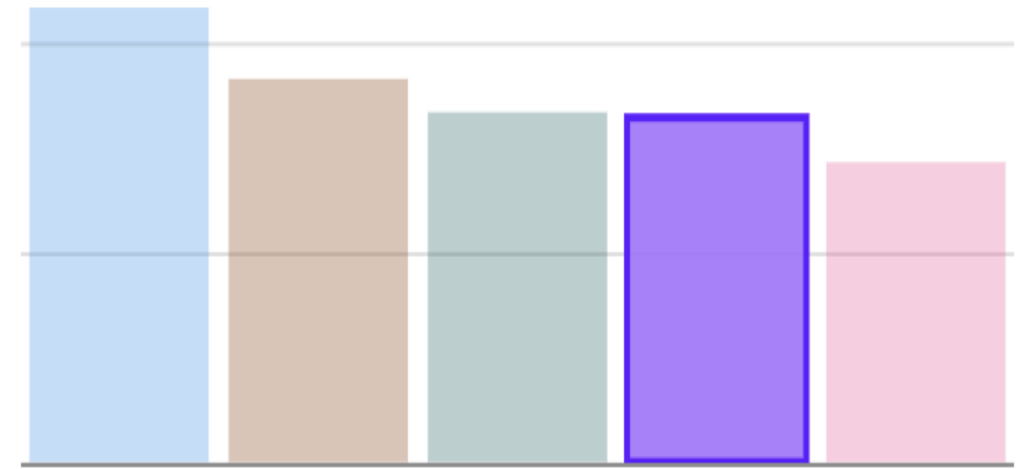- SQL is one of the popular database for Big Data

- Python used to AI and ML

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DATABASE TRENDS

Current Year

Next Year

Click to add text

DATABASE TRENDS - FINDINGS & IMPLICATIONS

Findings

- MySQL is the most popular database

- MongoDB and Redis are the most NoSQL database

- PostgreSQL is top popular open source database

Implications

- Open-source database is still preferable in companies

- NoSQL database will make impact for non-relational data

- Database for software development still requires SQL

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DASHBOARD

IBM Cognos Dashboard

https://ap1.ca.analytics.ibm.com/bi/?perspective=dashboard&pathRef=.my_folders%2FBuilding%2Ba%2Bdashboard%2Bwith%2BCognos%2BDashboard%2BEmbedded%2B%2528CDE%2529&action=view&mode=dashboard&subView=model00000181b3a8e65d_00000000
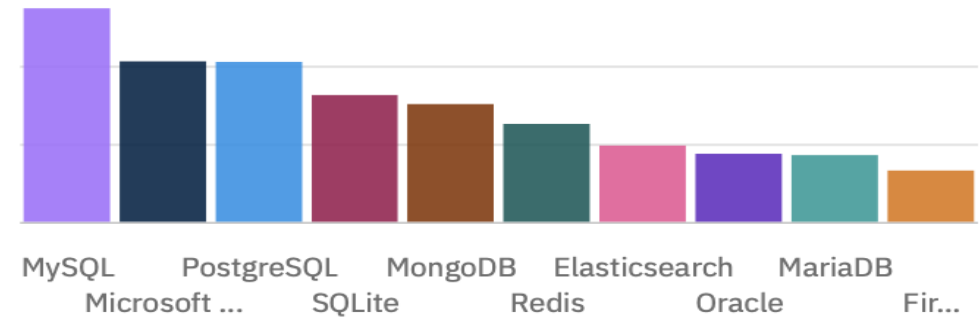
DASHBOARD TAB 1

Current Technology Usage
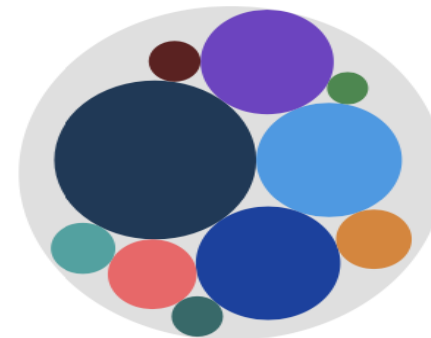

Language Worked With
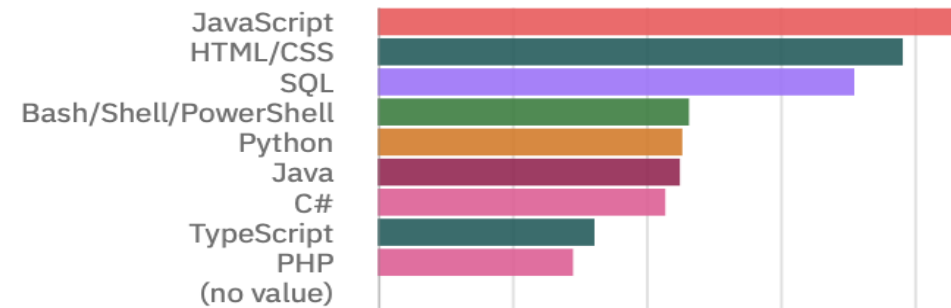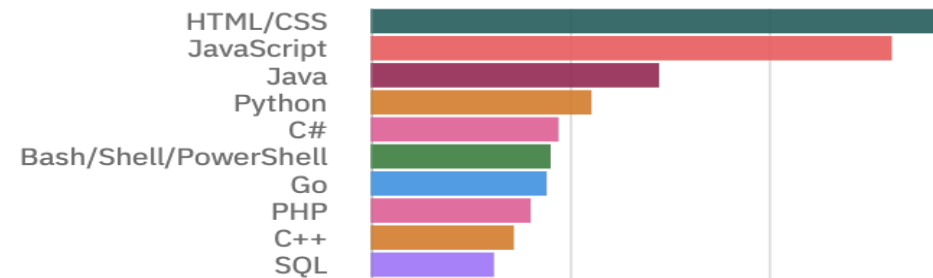
Database WorkedWith

Platform Worked With

Top 10 Web Frame Worked With

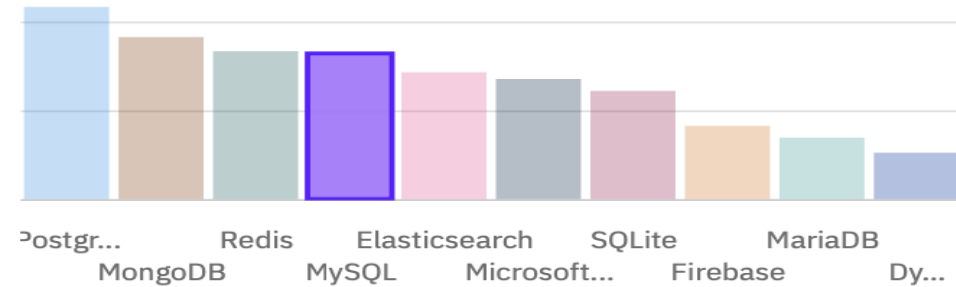IBM Developer

DASHBOARD TAB 2

Future Technology Trend

Top 10 Language Desire Next Year

- HTML/CSS
- JavaScript
- Java
- Python
- C#
- Bash/Shell/PowerShell
- Go
- PHP
- C++
- SQL

Database Desire Next Year

Postgr... MongoDB Redis MySQL Elasticsearch Microsoft... SQLite Firebase MariaDB Dy...

PlatformDesireNextYear

PlatformDesireNe...

PlatformDesireNe...

- Docker
- Linux
- AWS
- Google Cloud ...
- Kubernetes
- Windows
- iOS
- Android
- MacOS
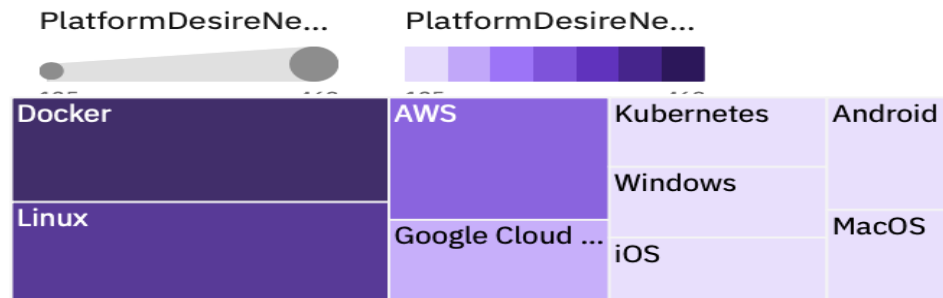
Top 10 WebFrameDesireNextYear
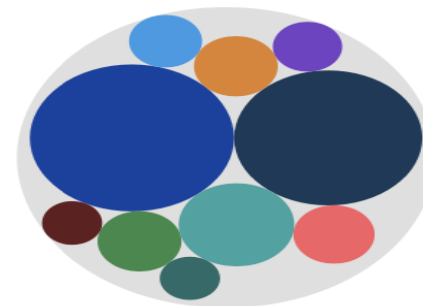
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DASHBOARD TAB 3
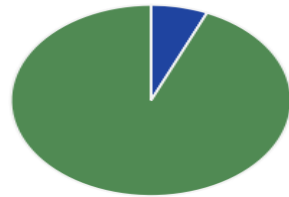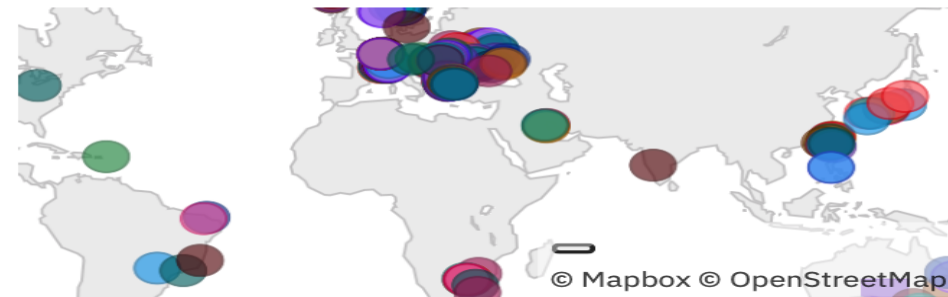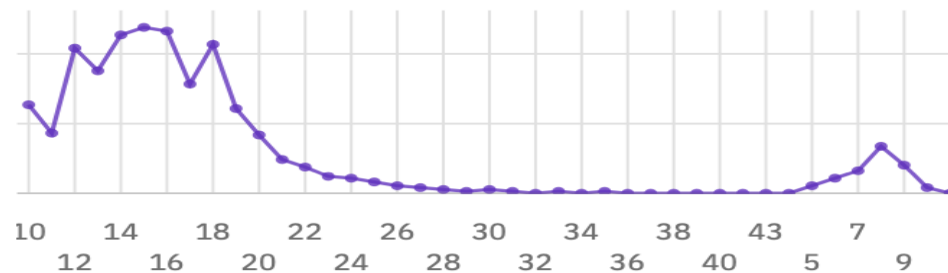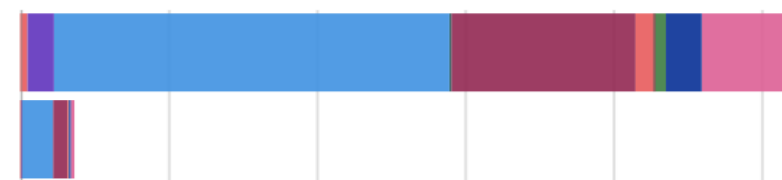
DISCUSSION

- Technology trends who usage current and next year
- Demographic overview
- Gender, age and education discrimination in IT industry

OVERALL FINDINGS & IMPLICATIONS

Findings

- Technology trends change every period
- USA is the top country in IT
- Gender gaps in IT industry

Implications

- IT engineer/programmer should be allow up to date the latest technologies
- Jobs in IT industry might be allow up to date
- No gaps in age and gender to concerns or benefit of employment
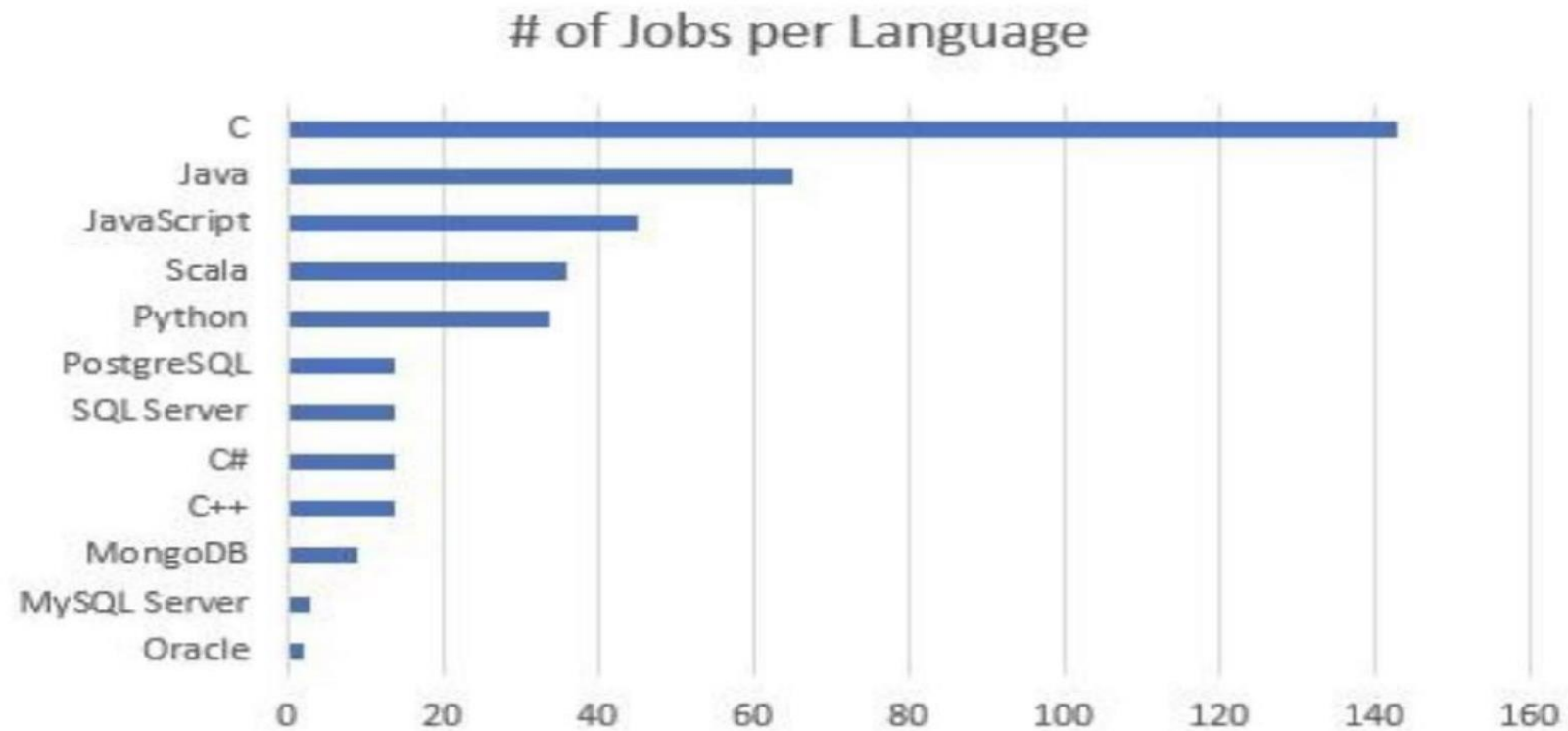
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CONCLUSION

- Technology trends who usage current and next year

- Demographic overview

- Gender, age and education in IT industry

- Trends salaries in IT industry

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APPENDIX

Include any relevant additional charts, or tables that you may have created during the analysis phase.

JOB POSTINGS

# of Jobs per Language

POPULAR LANGUAGES

Average Annual Salary