



# Developers Survey 2019 Analysis

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# OUTLINE

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- Executive Summary
- Introduction
- Methodology
- Results
  - Visualization – Charts
  - Dashboard
- Discussion
  - Findings & Implications
- Conclusion
- Appendix

# EXECUTIVE SUMMARY

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- Current Technology Usage

- Language
- Database
- Platform
- Web Frame

- Future Technology Usage

- Language
- Database
- Platform
- Web Frame

- Demographic Survey

- Gender
- Country
- Age
- Education level

# INTRODUCTION

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- Analyze trends in technology for developers around the world
- Goal of the Analysis - Identify the followings:
  - Top programming languages
  - Top databases
  - Top platforms
  - Top web frames
- Targeted Audience:
  - Developers
  - Information technology workers
  - Computer science community





# METHODOLOGY

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- Data Source – Dataset
  - Stack Overflow 2019 Developer Survey
  - Job Postings
- Languages Used
  - Python
  - SQL
- Data Cleaning
- Data Exploration
- Data Visualization
  - Python libraries
  - IBM Cognos Analytics
- Presentation

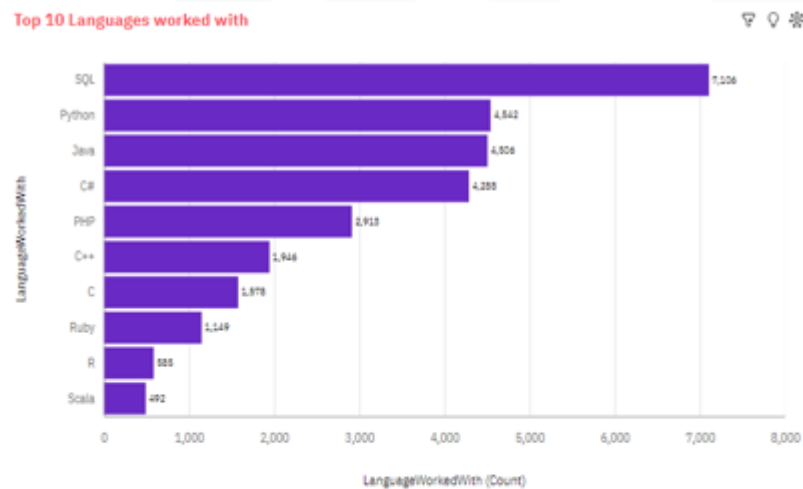
# RESULTS

	 Respondent	 LanguageWorkedWith	 LanguageDe...eNextYear	DatabaseWorkedWith	DatabaseDe...eNextYear	PlatformWorkedWith
	4	C	C	MySQL	MySQL	Linux
	4	C++	C#	SQLite	SQLite	Windows
	4	C#	JavaScript	Null	Null	Null
	4	Python	SQL	Null	Null	Null
	4	SQL	Null	Null	Null	Null
	9	C#	C	PostgreSQL	Redis	Docker
	9	Python	Ruby	Null	Null	MacOS
	9	Ruby	Rust	Null	Null	Slack
	9	SQL	TypeScript	Null	Null	Null
	13	PHP	Rust	MySQL	Null	IBM Cloud or Watson

# PROGRAMMING LANGUAGE TRENDS

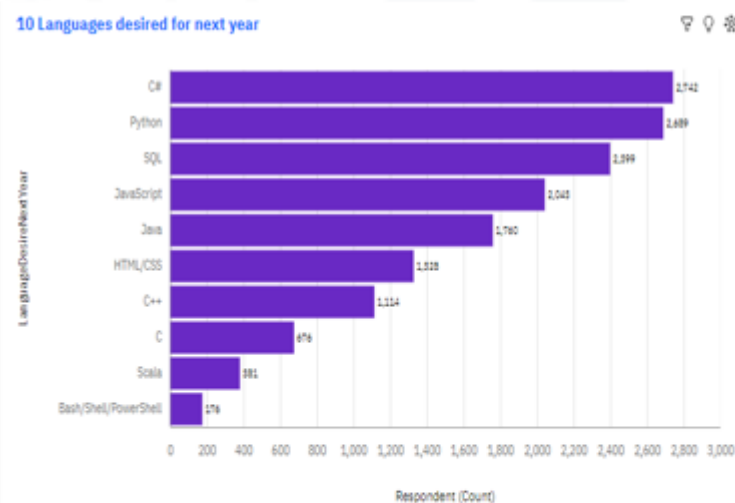
## Current Year

Top 10 Languages worked with



## Next Year

10 Languages desired for next year



# PROGRAMMING LANGUAGE TRENDS - FINDINGS & IMPLICATIONS

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## Findings

- SQL is the top one
- Python and Java are getting popular
- Scala and R are the least desired
- C# is less desired compared to next year trend

## Implications

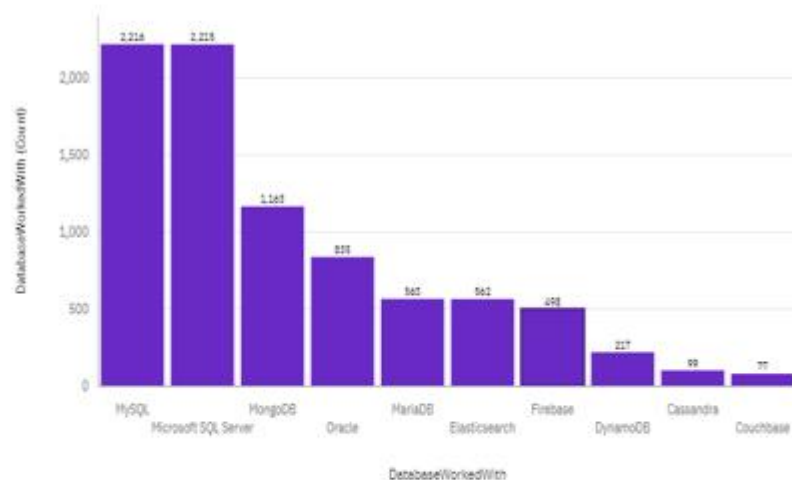
- Python and SQL are crucial for developers
- Scala looks to remain as one of least favorites for tech industry
- Platforms where a language is used to write has impact on the overall trend



# DATABASE TRENDS

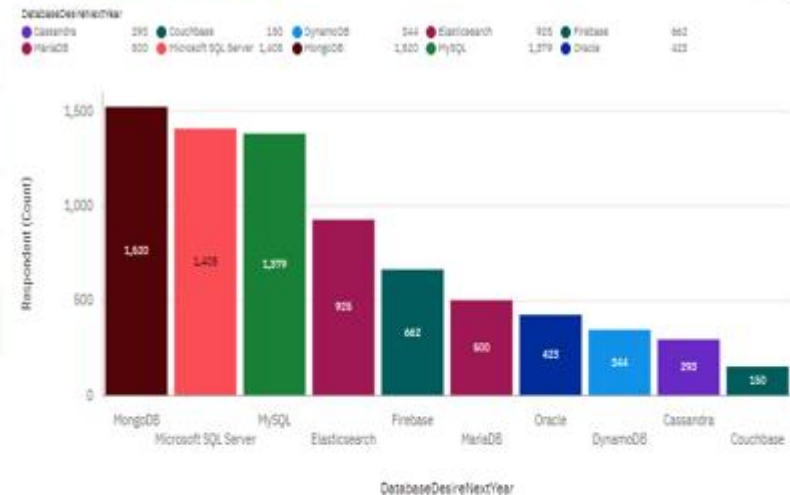
## Current Year

Top 10 databases worked with



## Next Year

Top 10 Databases desired for next year



# DATABASE TRENDS - FINDINGS & IMPLICATIONS

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## Findings

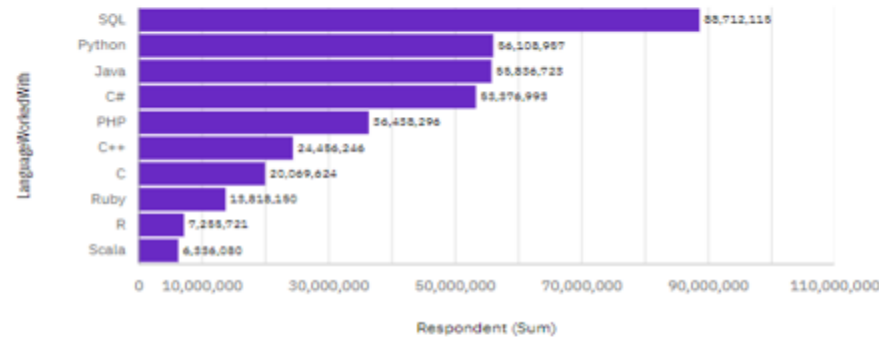
- MSQL and SQL Server are very favorable
- Couchbase looks to be the least favorite for respondents
- MongoDB is getting popular among developers

## Implications

- Non-Relational DBs like MongoDB are becoming widely used
- Relational DBs like MYSQL appear to be still the favorites
- Big data technology will still need both, relational and non-relational DBs

# Current Technology Usage

Top 10 Languages worked with



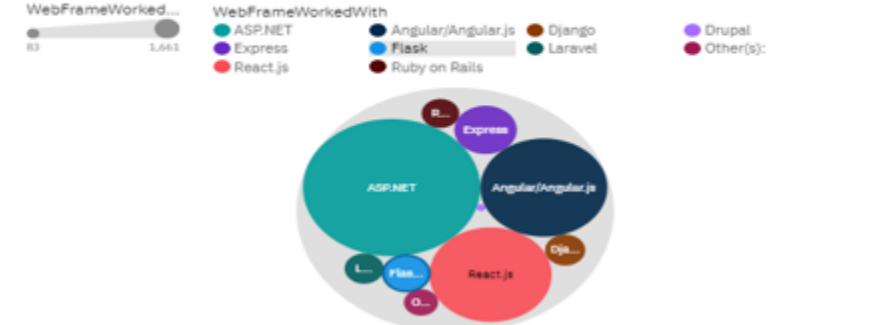
Top 10 databases worked with



Platforms worked with

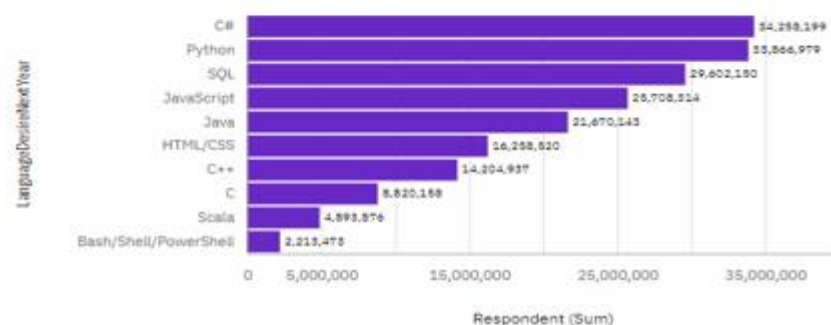


Top 10 web frames worked with

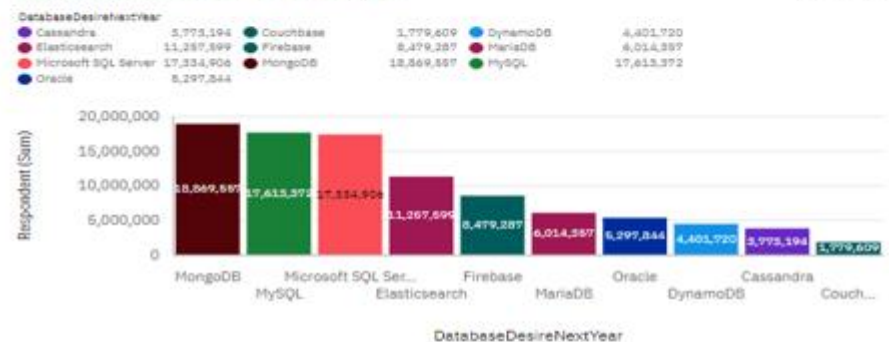


# Future Technology Trend

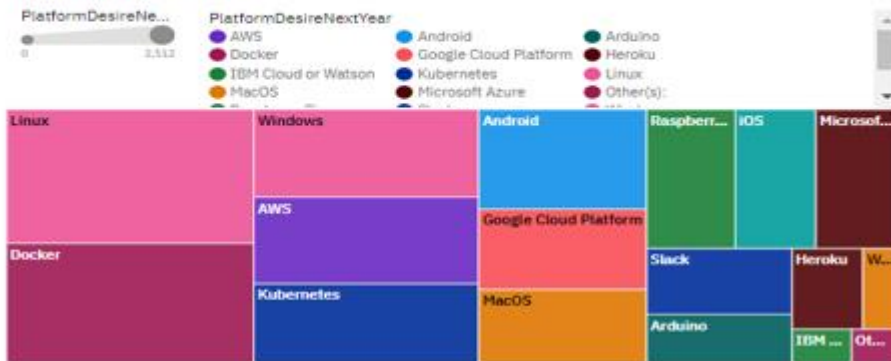
10 Languages desired for next year



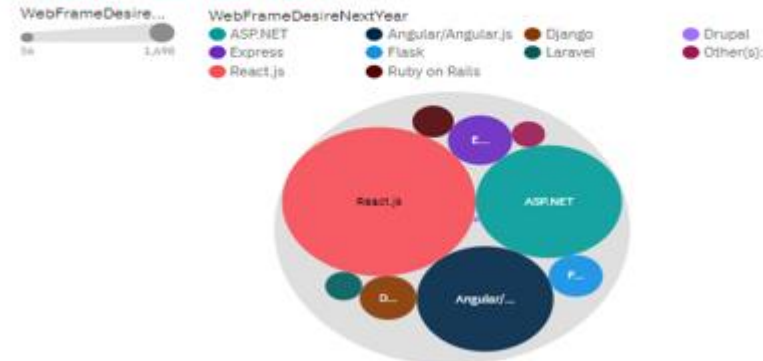
Top 10 Databases desired for next year



Platforms for next year



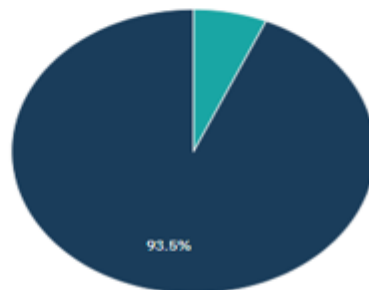
10 Web Frames for Next Year



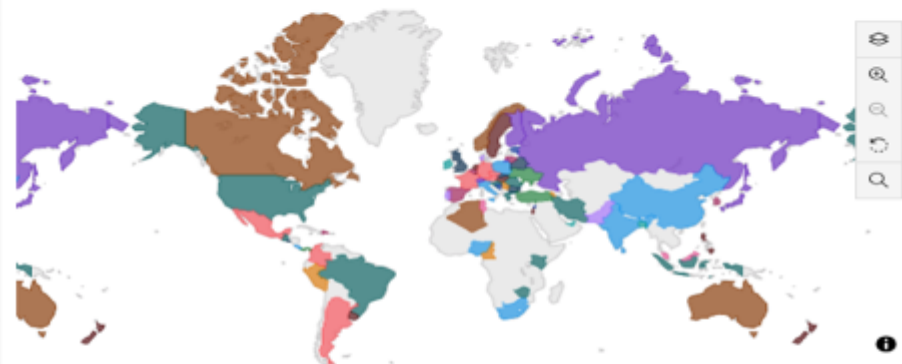
# Demographics

Respondents by Gender

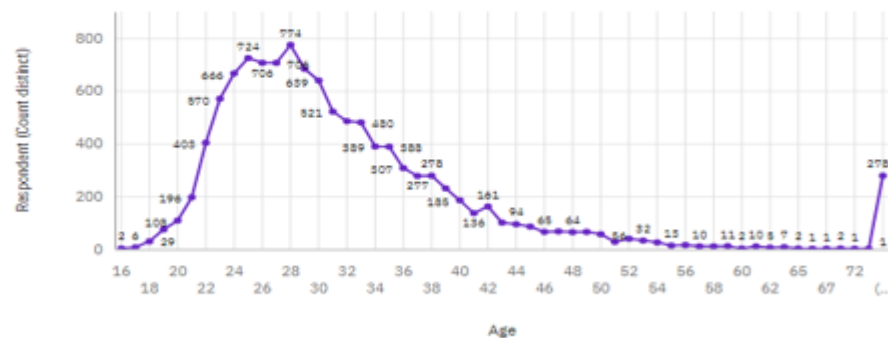
Gender  
 ● Woman ● Man



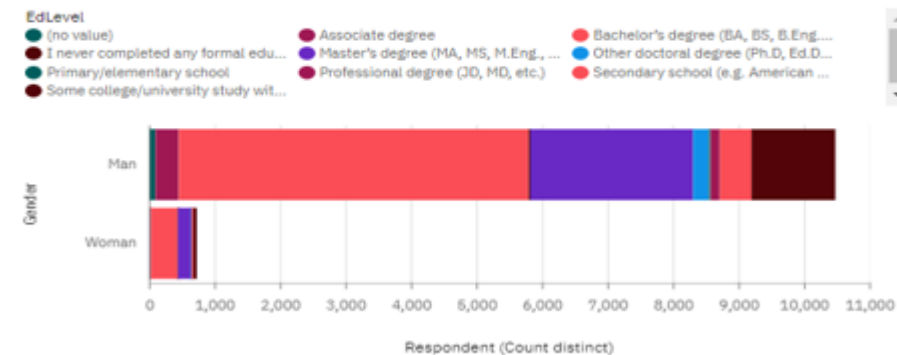
Respondent Count for Countries



Respondent Count by Age



Respondent Count by Gender, classified by Formal Education Level



# DISCUSSION

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- Technology Usage and Future trends
- Factors such as Gender, Age, Education
- Technology gaps in developing nations
- Skills and impact of training

# OVERALL FINDINGS & IMPLICATIONS

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## Findings

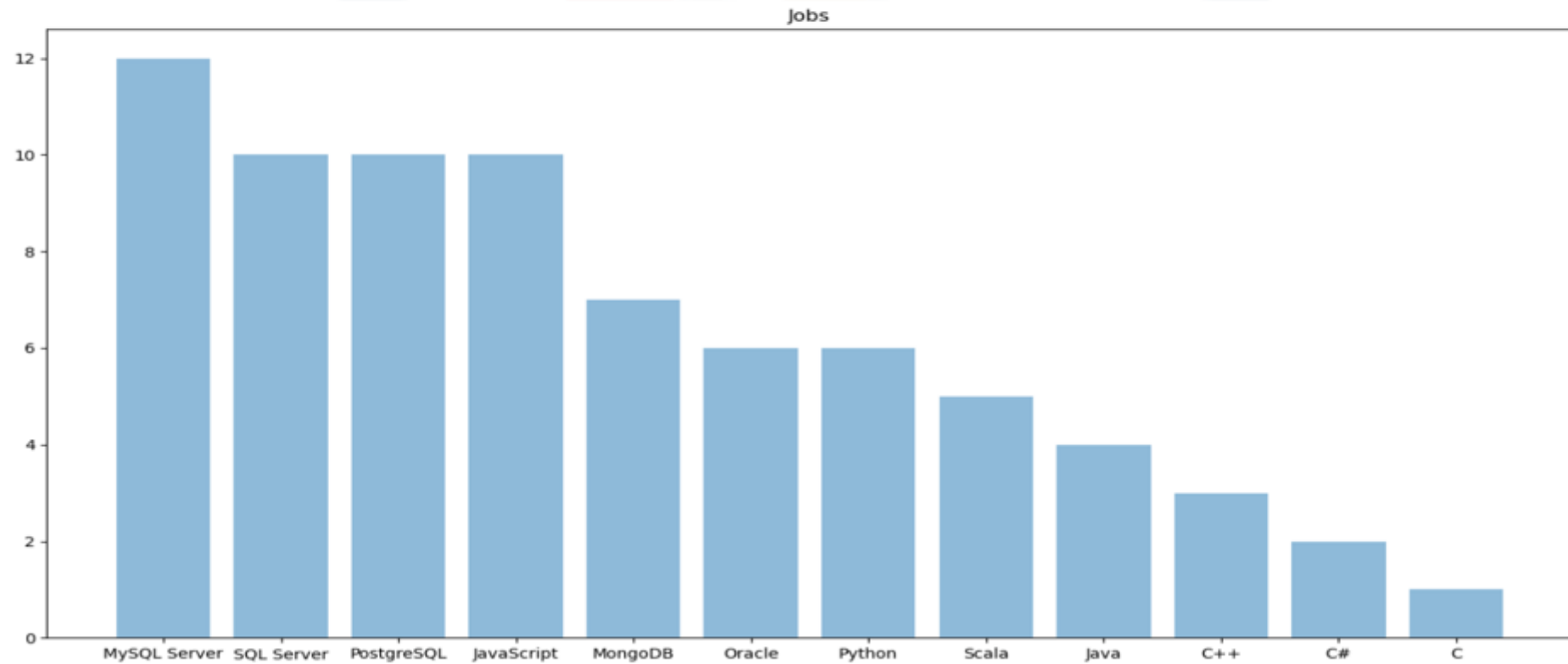
- Technology changes in fast pace
- Platforms like AWS are growing
- Massive gender gaps in tech

## Implications

- Developers must adapt to latest technologies
- Developing countries can benefit from advanced ones in tech
- More room should be open to close gender gaps in tech, this include training, bonuses

# JOB POSTINGS by Programming Language

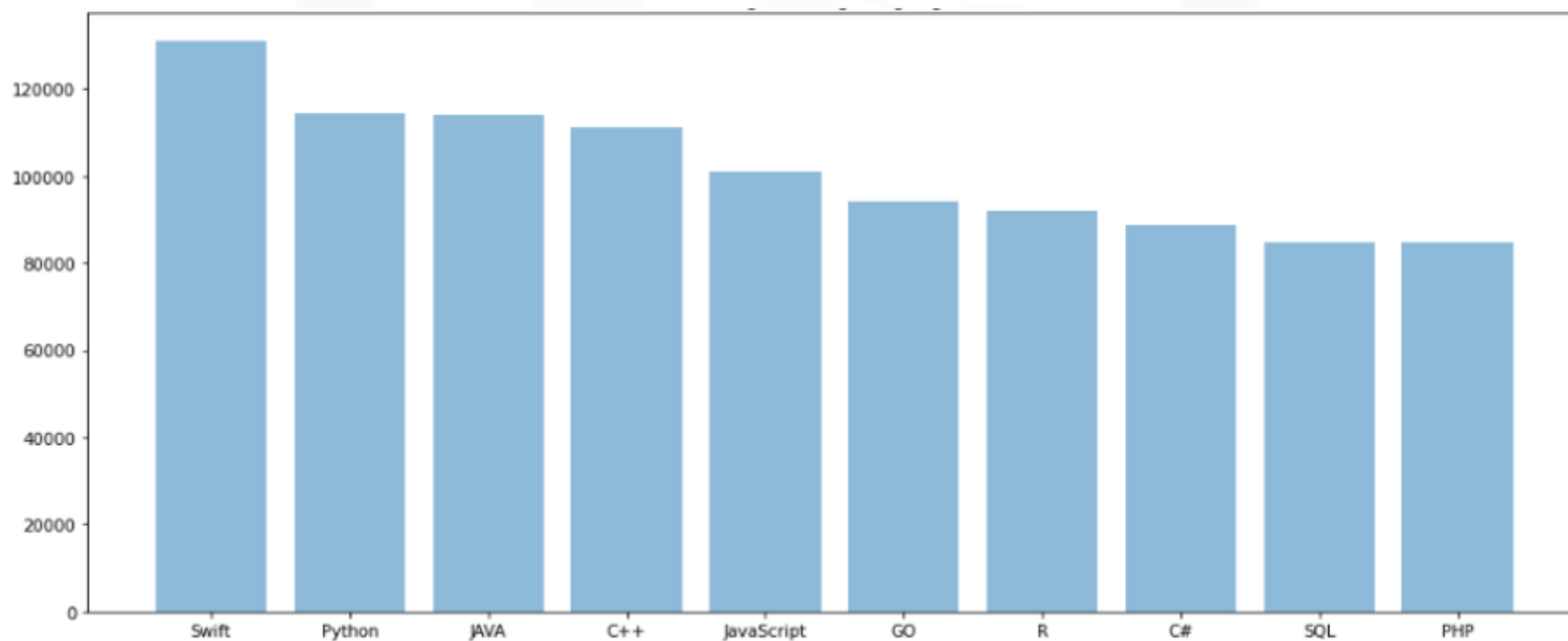
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## POPULAR LANGUAGES by Salary

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# CONCLUSION

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- Technology Trends and Future
- Programming Languages, platforms, databases and web frames
- Demographic factors and their impact on tech industry
- Education, training and skills
- Future of AI on technology