



# Stack Overflow Developer Survey 2019:

Findings & Implications

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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:**

- Top 5 Languages which are currently in trend.
- Top 5 Database which are currently in trend.
- Platforms that are currently in trend.
- Top Web frame Works which are currently in trend.

- **Future Technology Trend:**

- Top 5 language developer desire to learn next year.
- Top 5 Database Developer desire to learn next year.
- Desired platforms for the next year.
- Top web frames works desire for the next year.

- **Demographics:**

- Respondent Classified by Gender.
- Respondent Count by Countries.
- Respondent count by age.
- Respondent Classified by Education level.

# INTRODUCTION

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- What are the top 5 Language now and in future ?
- What are the top 5 databases now and in future ?
- What are the Correlation Between the numerical data.
- Does python is leading programming language in world ?
- Relational Vs Non-Relational Database.
- Which web frame works is developer used most ?
- Popular Programming Language in term of salary.

# METHODOLOGY

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- **Collecting Data Using GitHub API.**
  - The GitHub API allow us to search and view jobs with JSON over HTTP.
- **Scrap Data From the web pages.**
  - With requests library and BeautifulSoup which scrap the data over the webs.
- **Stack Overflow Survey Data.**
  - Survey include most of the text data.

# RESULTS

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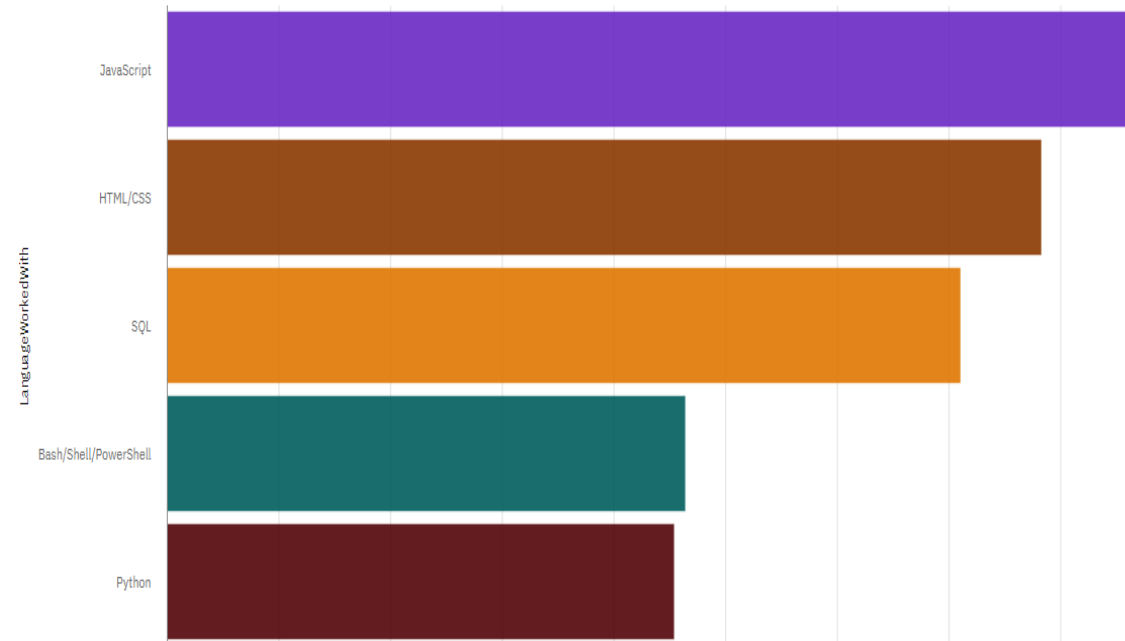


# PROGRAMMING LANGUAGE TRENDS

## Current Year

Top 5 Language Work With

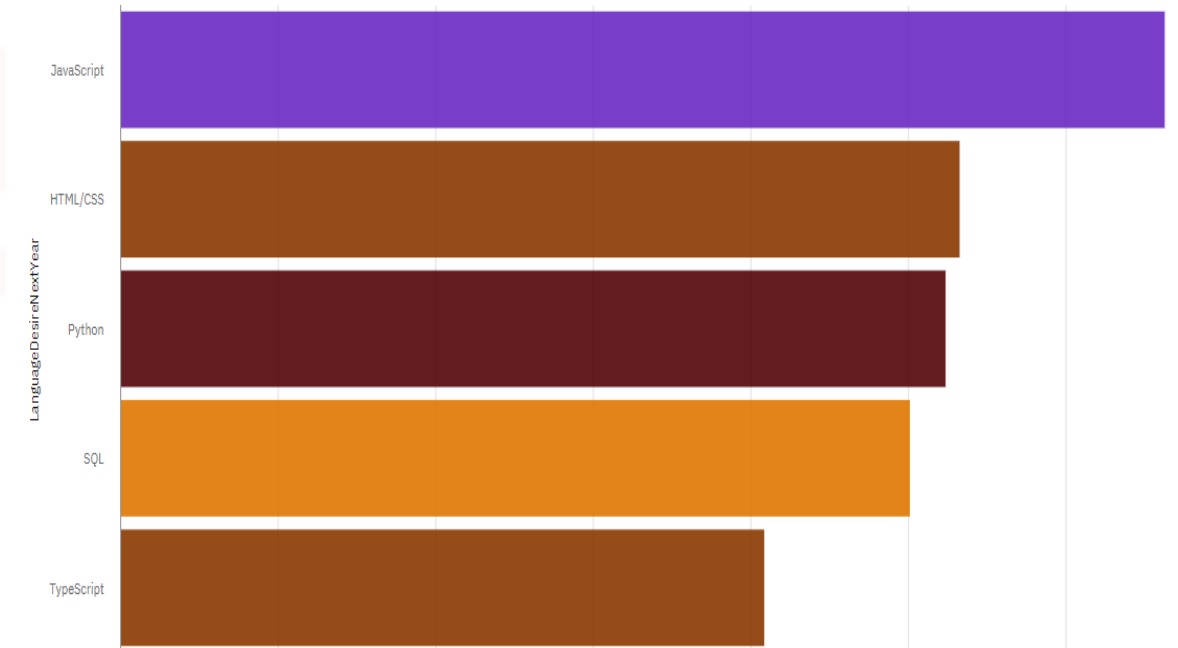
LanguageWorkedWith  
SQL Python JavaScript HTML/CSS Bash/Shell/PowerShell



## Next Year

Top 5 Language Desire for Next Year

LanguageDesireNextYear  
HTML/CSS JavaScript Python SQL TypeScript



# PROGRAMMING LANGUAGE TRENDS – FINDINGS & IMPLICATIONS

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## Findings

- JavaScript is most popular language to use in current and also in future.
- Html/CSS is second most Popular language to use in current and also in future.
- Python has rising trend.
- Typescript also have rising trend in future.

## Implications

- Html/CSS and JavaScript is most popular language which is used by developer and also want to learn in future.
- Developer also want to learn python in future because of its library like Django and flask.
- Java C++, C## has lost their momentum people are looking other language apart from them .

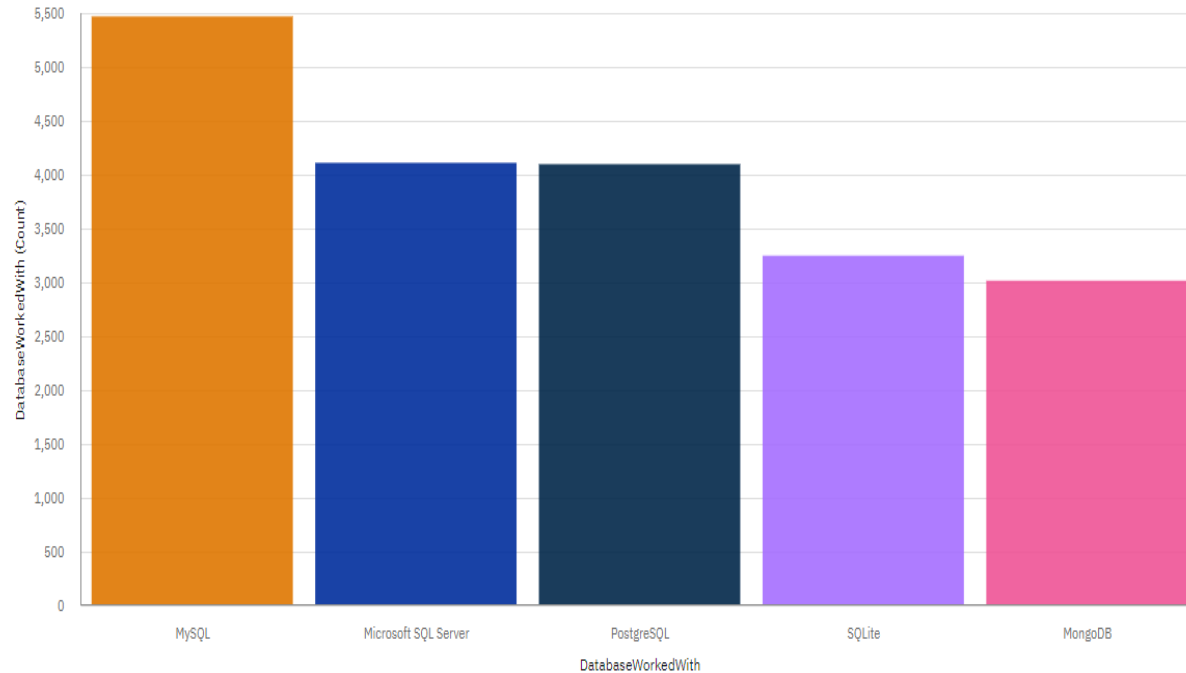


# DATABASE TRENDS

## Current Year

Top 5 Database Work with

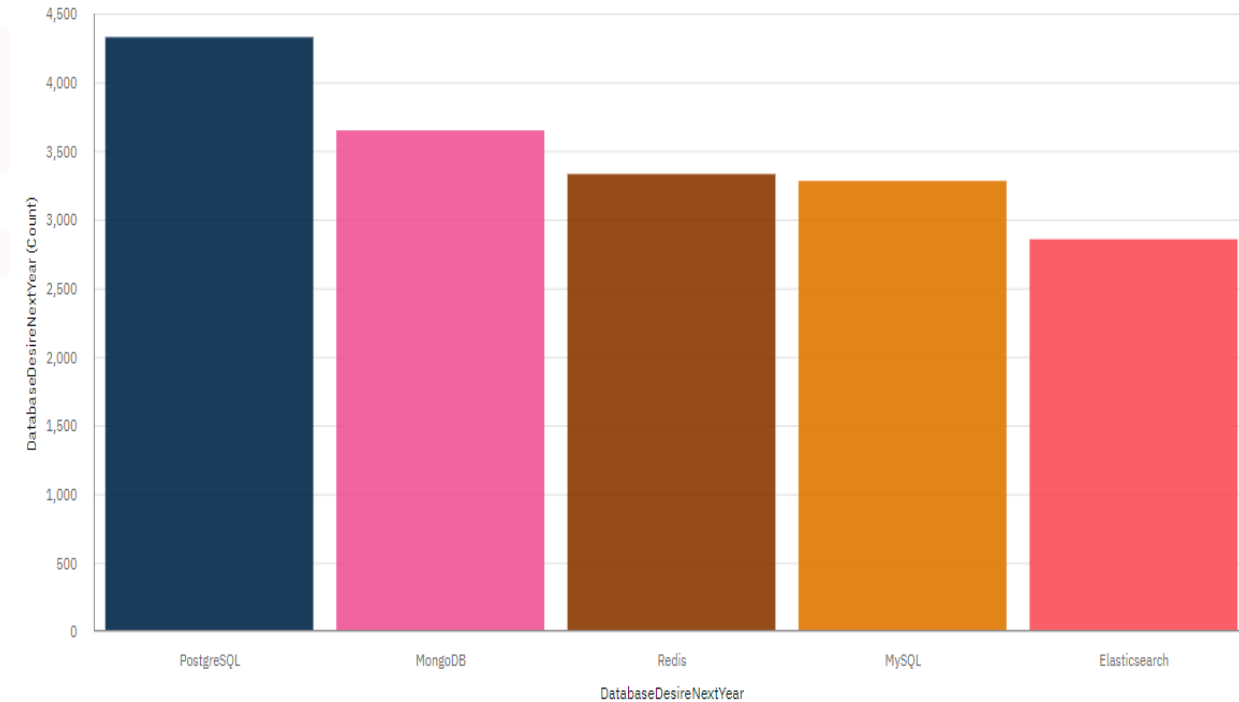
DatabaseWorkedWith  
● Microsoft SQL Server ● MongoDB ● MySQL ● PostgreSQL ● SQLite



## Next Year

Top 5 Database Desire for Next Year

DatabaseDesireNextYear  
● Elasticsearch ● MongoDB ● MySQL ● PostgreSQL ● Redis



# DATABASE TRENDS – FINDINGS & IMPLICATIONS

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## Findings

- MySQL dominant the current trend.
- RDBMS has dominant in current trend.
- Non-RDBMS has become more popular in the future because developer want to learn Non-Relational Database.

## Implications

- People are highly interested to learn Non-Relational database.
- Postgre SQL and Mongo DB become very popular in future trend.
- It is clear that big data will become very popular in up coming future.

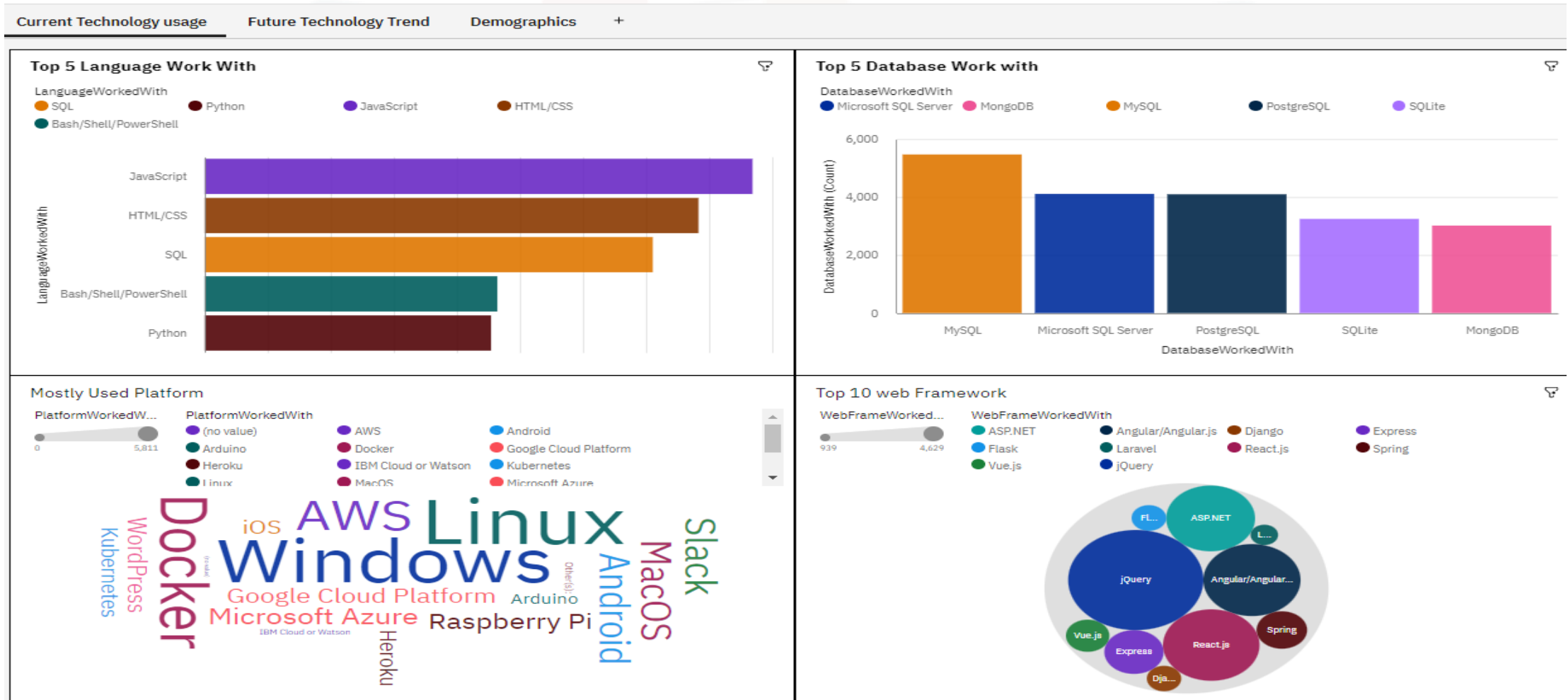
# DASHBOARD

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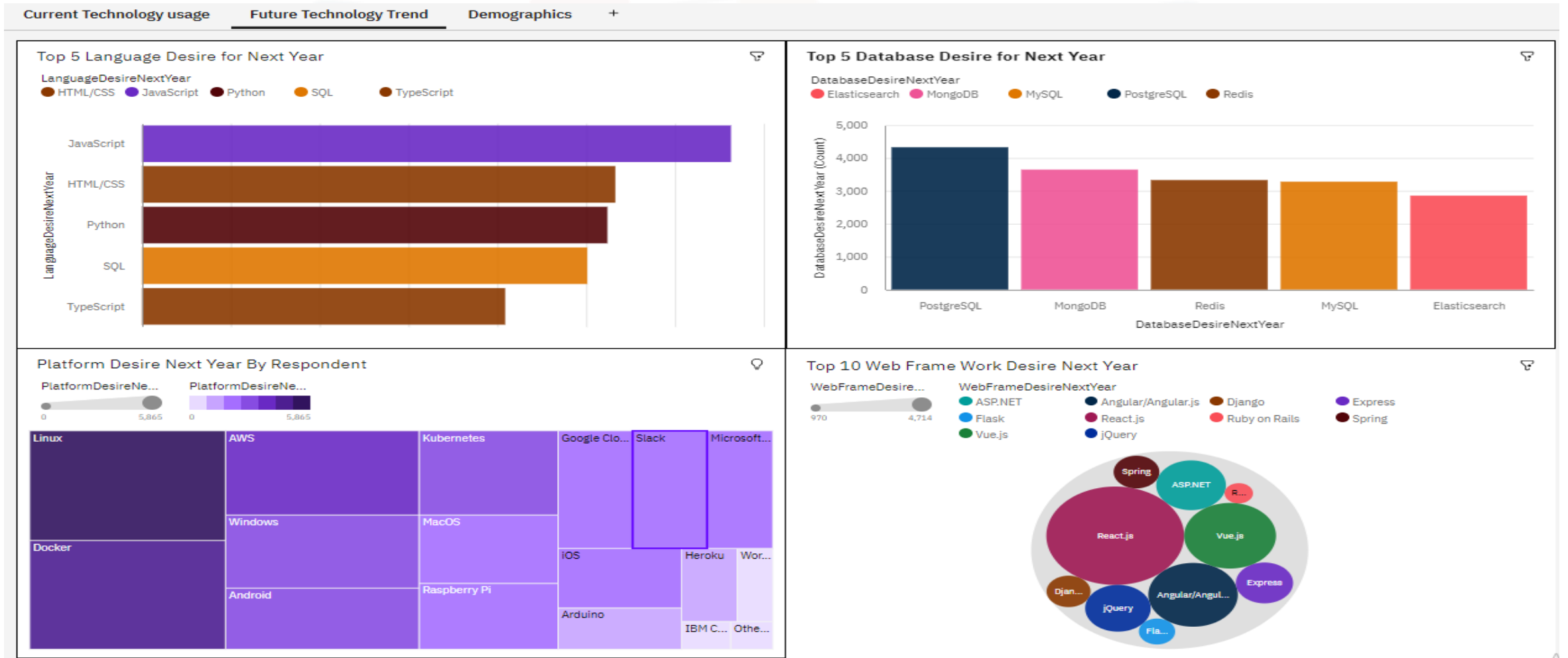


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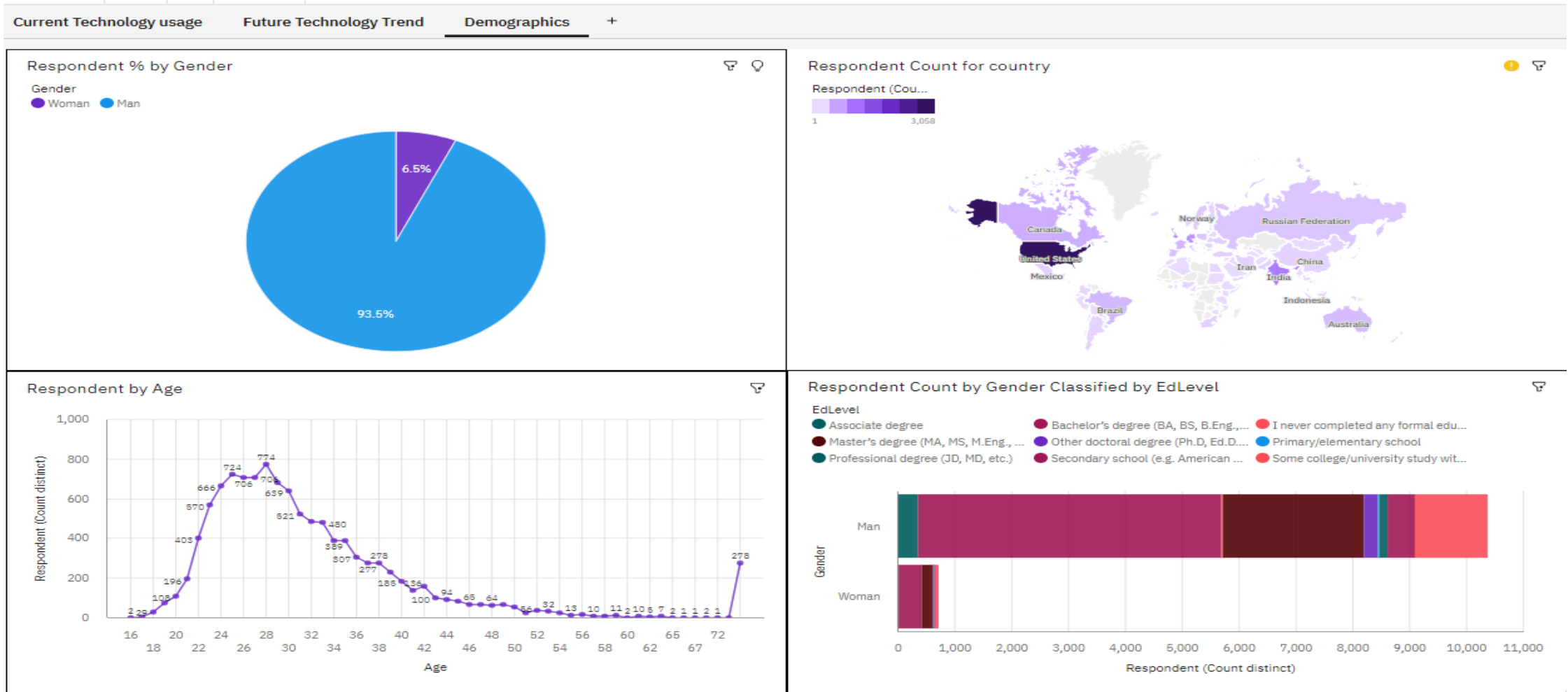
# DASHBOARD TAB 1



# DASHBOARD TAB 2



# DASHBOARD TAB 3



# DISCUSSION

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- It is clear from previous study that upcoming future is for big Data so the knowledge on big data along with advanced programming skills is very helpful in the future.

# OVERALL FINDINGS & IMPLICATIONS

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## Findings

- The upcoming programming trend is for python because it has lots of libraries which help data scientist and JavaScript is very popular in the developers.
- The upcoming trend for databases is Non-Relational Database.

## Implications

- People are looking for big data because data is every where.
- People are looking for advanced programming language along with easy learning because today there is so many e-learning platform where people easily learn programming.



# CONCLUSION

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- The most popular programming language in demand is JavaScript.
- The most popular database in demand is MYSQL.
- The most popular web frame in demand is react JS.
- Swift has highest annual Salary compare to all programming languages.

# APPENDIX



## Correlation

### Finding correlation

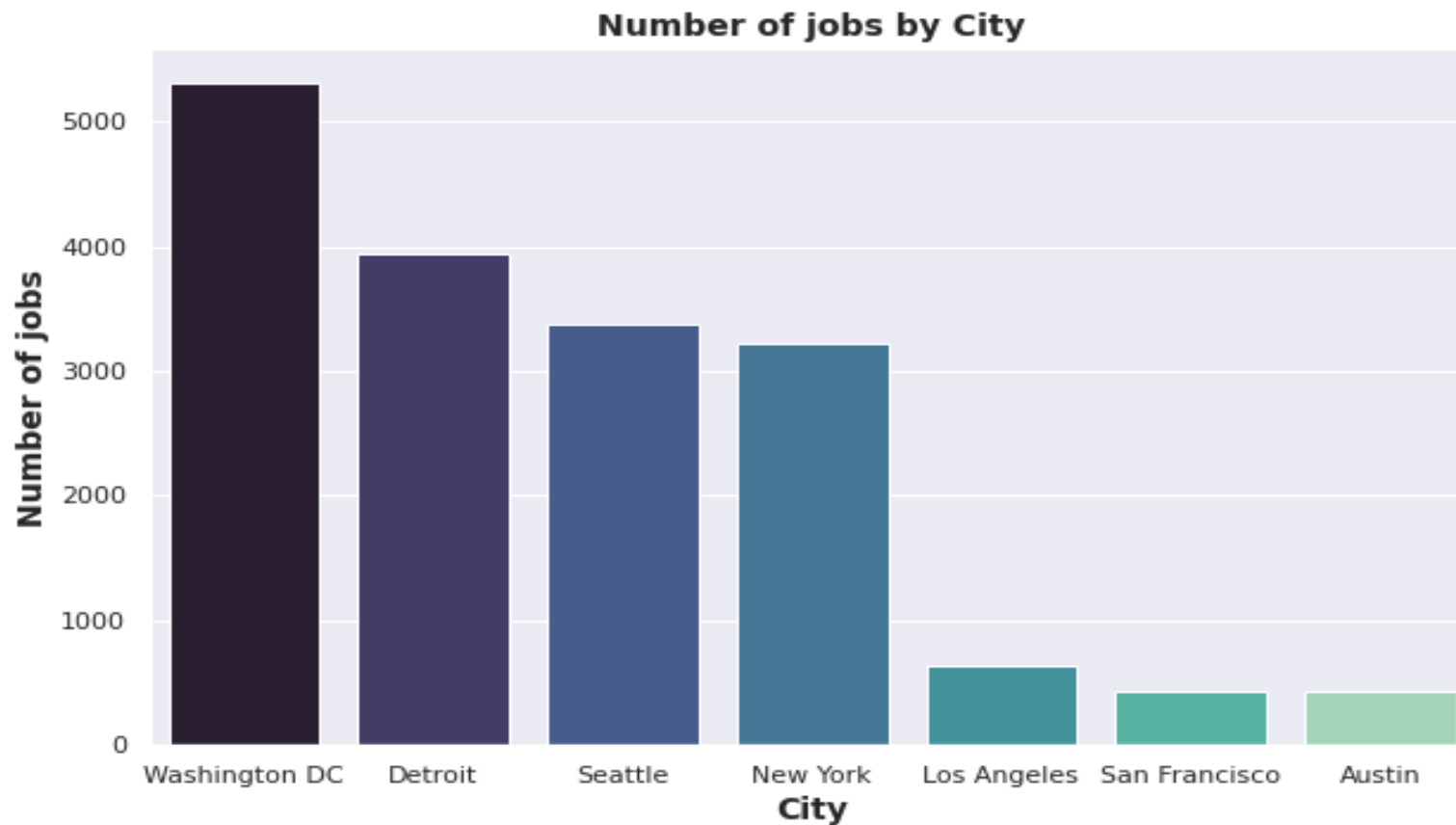
Find the correlation between Age and all other numerical columns.

```
In [47]: # your code goes here  
df.corr()
```

Out[47]:

	Respondent	CompTotal	ConvertedComp	WorkWeekHrs	CodeRevHrs	Age
Respondent	1.000000	-0.019364	0.010878	-0.015275	0.002980	0.003950
CompTotal	-0.019364	1.000000	-0.063561	0.004975	0.017536	0.006371
ConvertedComp	0.010878	-0.063561	1.000000	0.034351	-0.088934	0.401821
WorkWeekHrs	-0.015275	0.004975	0.034351	1.000000	0.031963	0.037452
CodeRevHrs	0.002980	0.017536	-0.088934	0.031963	1.000000	-0.017961
Age	0.003950	0.006371	0.401821	0.037452	-0.017961	1.000000

# GITHUB JOB POSTINGS



# POPULAR LANGUAGES

