

# Languages used in Technology

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

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# OUTLINE



**Executive  
Summary**



**Introduction**



**Methodology**



**Results**

Visualization –  
Charts  
Dashboard



**Discussion**

Findings &  
Implications



**Conclusion**



**Appendix**

# EXECUTIVE SUMMARY

- Technology languages, database and platforms are creating new advanced tools for problem solving and analysis.
- Innovation in technology is creating more career opportunities, especially in more developed countries.
- **Top 3 Technology languages:**
  - JavaScript
  - Python
  - SQL
- **Top 3 Technology database platforms:**
  - SQLite
  - Redis
  - PostgreSQL

# INTRODUCTION

Technology languages and database are advancing!

- Are the masses being left behind ?
- How is innovation in tech affecting the us :

  - Which platforms are mostly used by large and small firms ?
  - Integration of Education in technology?
  - Perception of technology in future ?
  - What are top desired platforms and languages ?
  - Does innovation technology create career opportunities ?

# METHODOLOGY



Collected data by  
API from external  
source



Collected data by  
Webscraping



Data was set into  
tables by data frame



Data was validated,  
analyzed and stored  
into CSV



Data visualization:



Jupyter Notebook  
seaborn and python  
plot



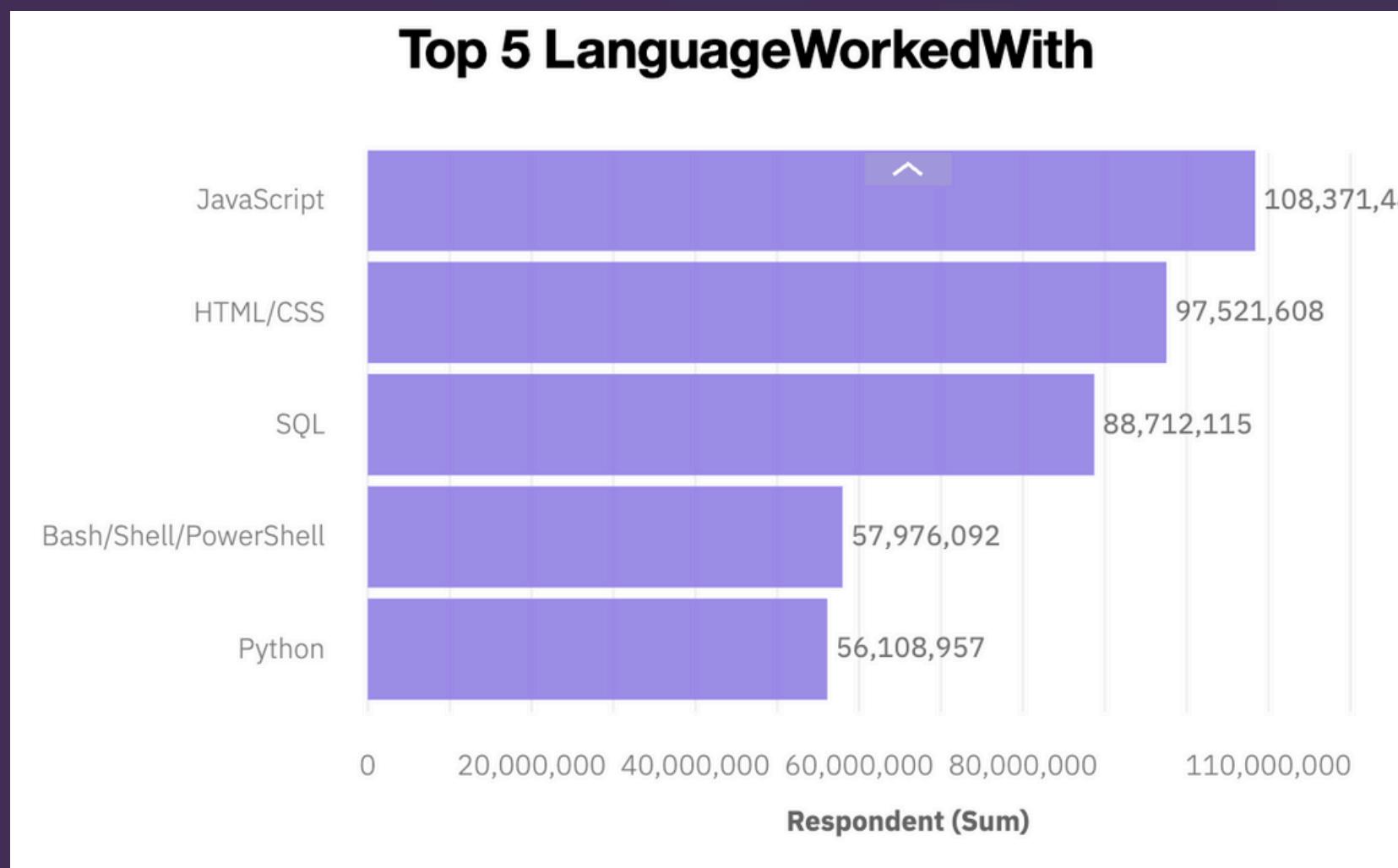
Cognos Dashboards  
dynamic visuals



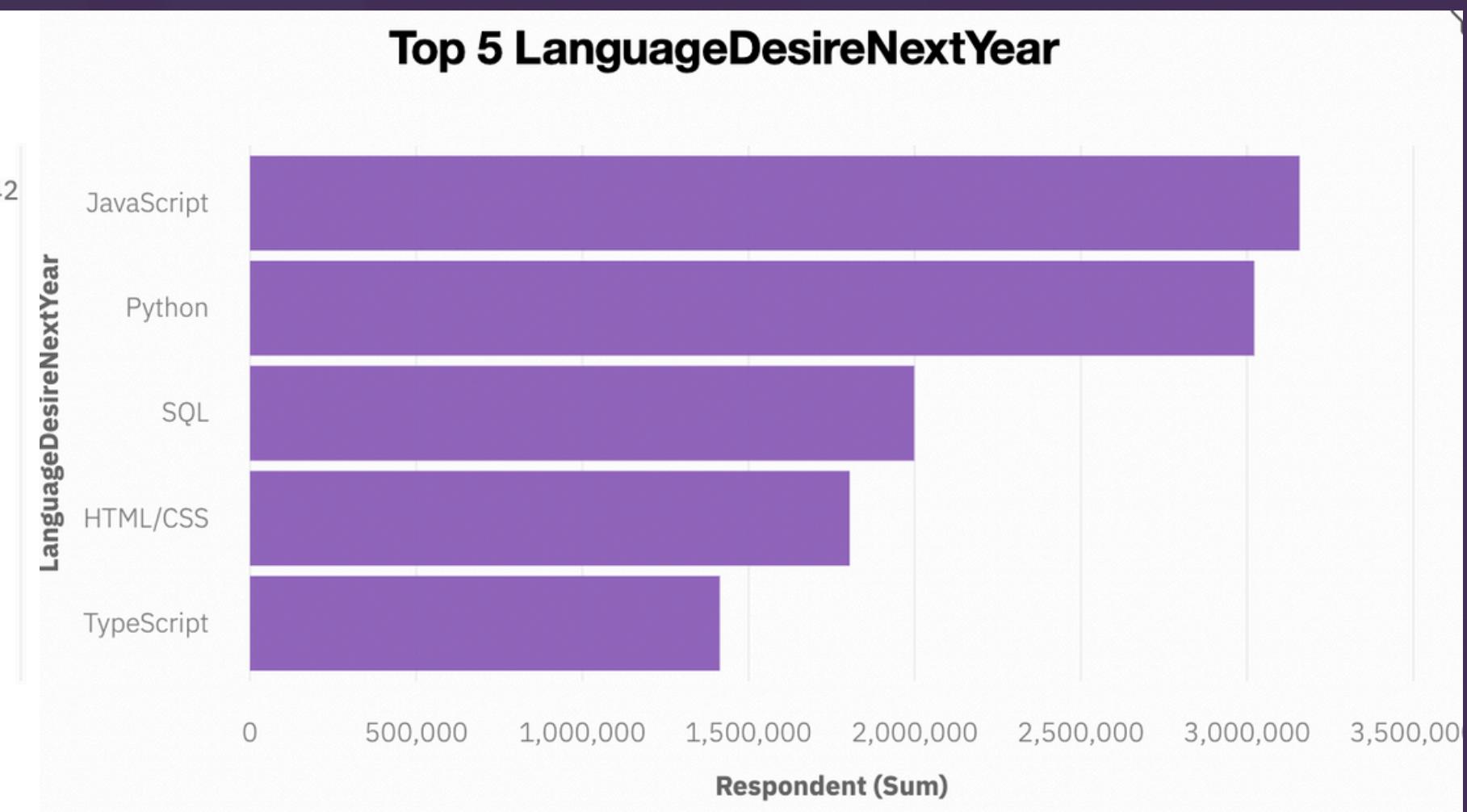
# RESULTS

# PROGRAMMING LANGUAGE TRENDS

Current Year



Next Year



# PROGRAMMING LANGUAGE TRENDS - FINDINGS & IMPLICATIONS

## Findings

- Current Language and desired trends not the same.
- Top 3 desired future Language are JavaScript, Python and SQL.
- Power shell/Shell no longer in top 5.

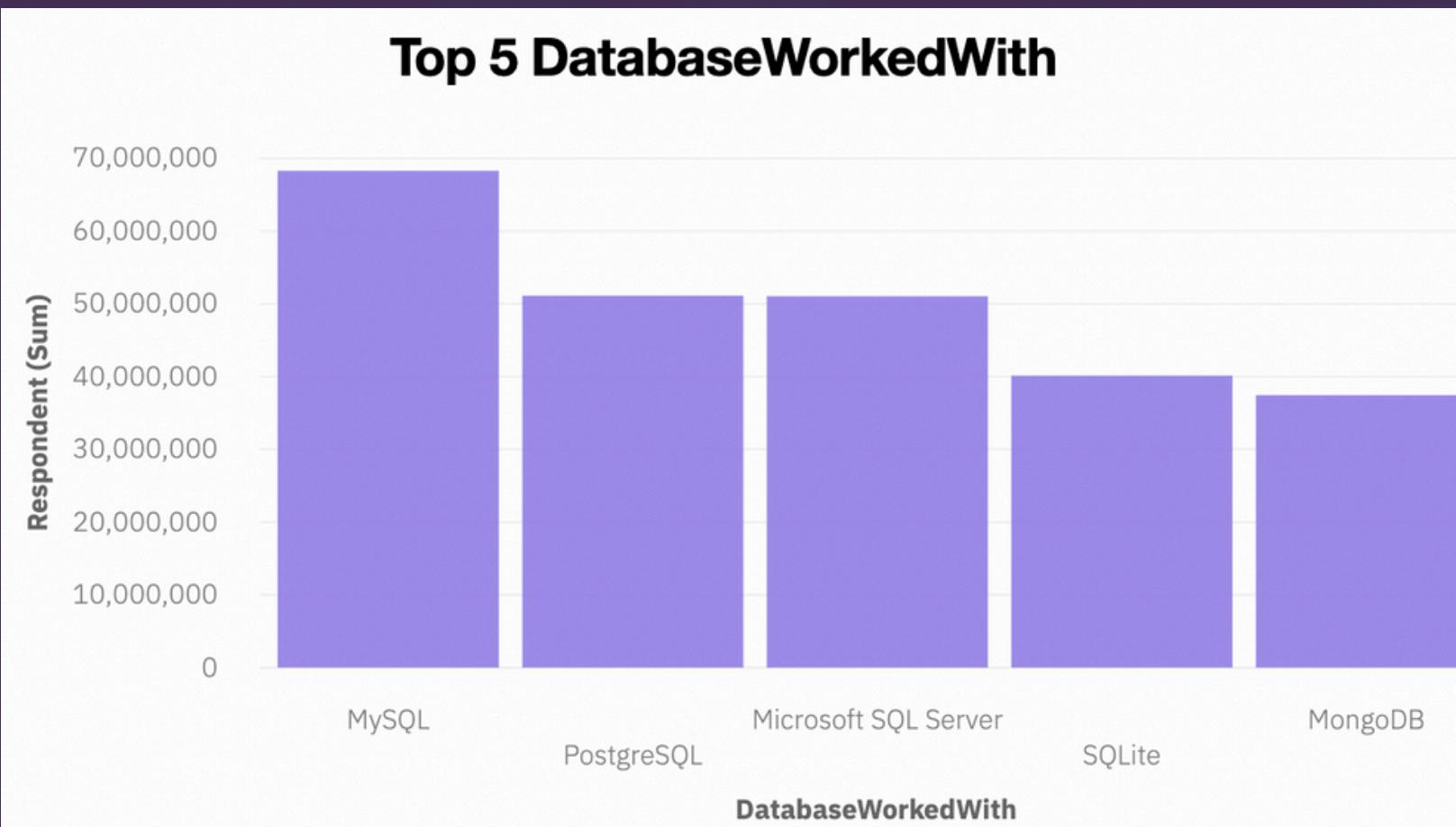
## Implications

- Language trends are changing with time.
- Python and SQL are becoming more popular while JavaScript remains top preferred language to use.
- People seems currently to prefer to use Typescript.

# DATABASE TRENDS

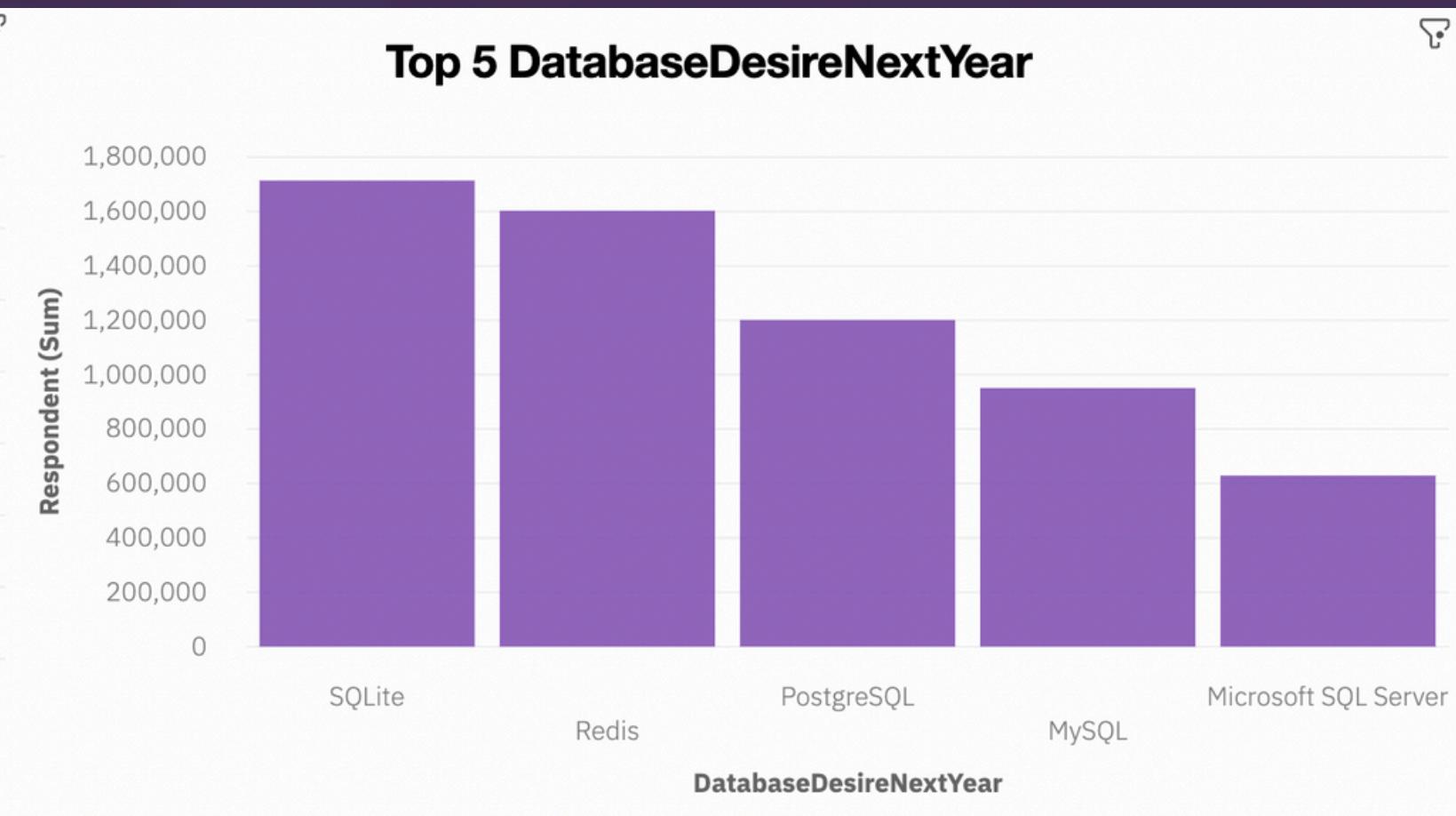
Current Year

**Top 5 DatabaseWorkedWith**



Next Year

**Top 5 DatabaseDesireNextYear**



# DATABASE TRENDS - FINDINGS & IMPLICATIONS

## Findings

- SQLite and Redis seems to new preferred databases to use.
- PostgreSQL is remains in Top 3.

## Implications

- Redis is fills in a void in database technology.
- People are consistent with the use of PostgreSQL database.

Overall MySQL and Microsoft SQL Server are becoming less desired for future use.

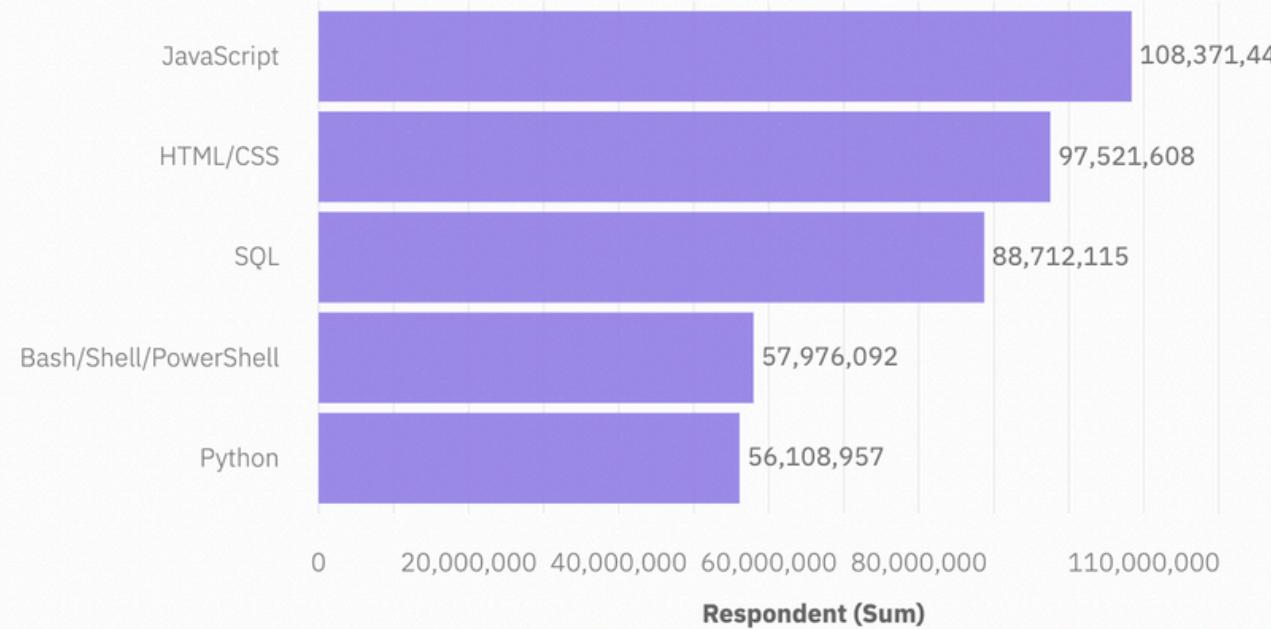
# DASHBOARD

Link:

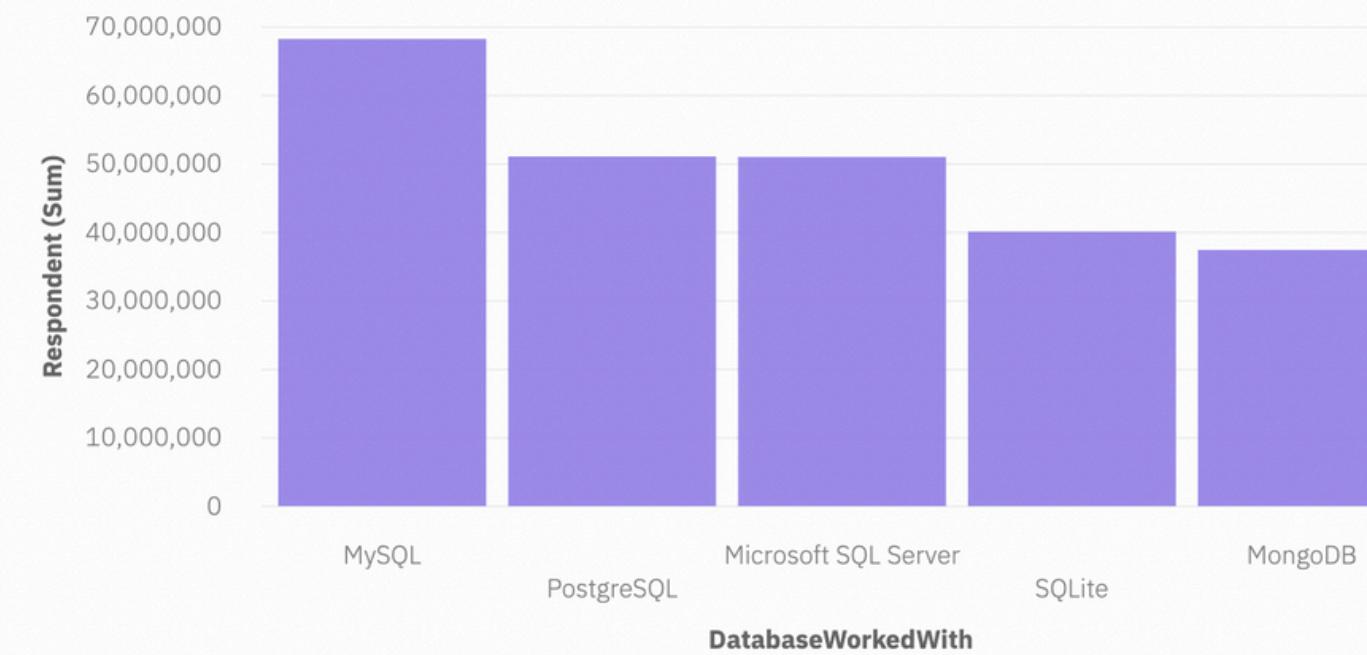
<https://dataplatform.cloud.ibm.com/dashboards/1352cfal-32f6-48af-959b-bad1e9d314f5/view/021ef615399517ce49b2b5e4079a2b502830730fbffff870b88867b495a312597a83847c4c87e4d0f89180166f5e4155bcd>

# Current Technology Usage

**Top 5 LanguageWorkedWith**



**Top 5 DatabaseWorkedWith**

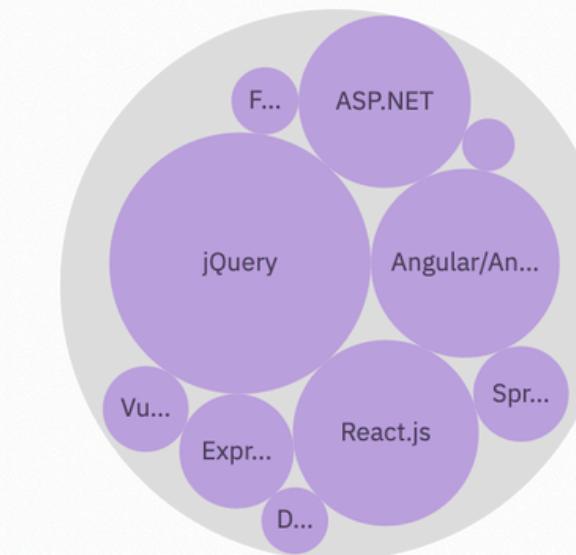


**PlatformWorkedWith**

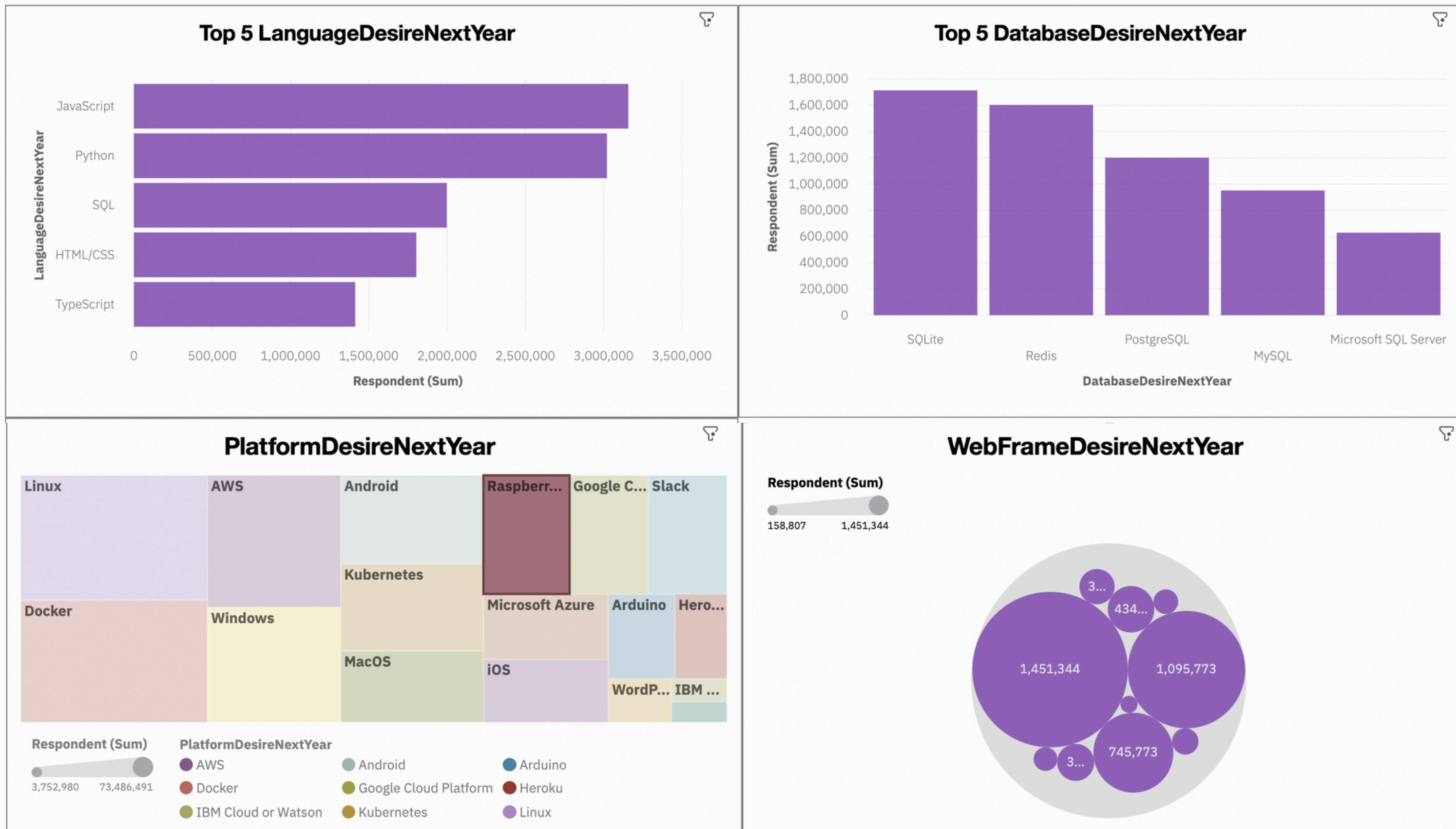
MacOS Windows  
Other(s): Kubernetes AWS  
Docker IBM Cloud or Watson  
Google Cloud Platform Slack  
Heroku Microsoft Azure WordPress  
Linux Raspberry Pi Android  
iOS Arduino

**WebFrameWorkedWith**

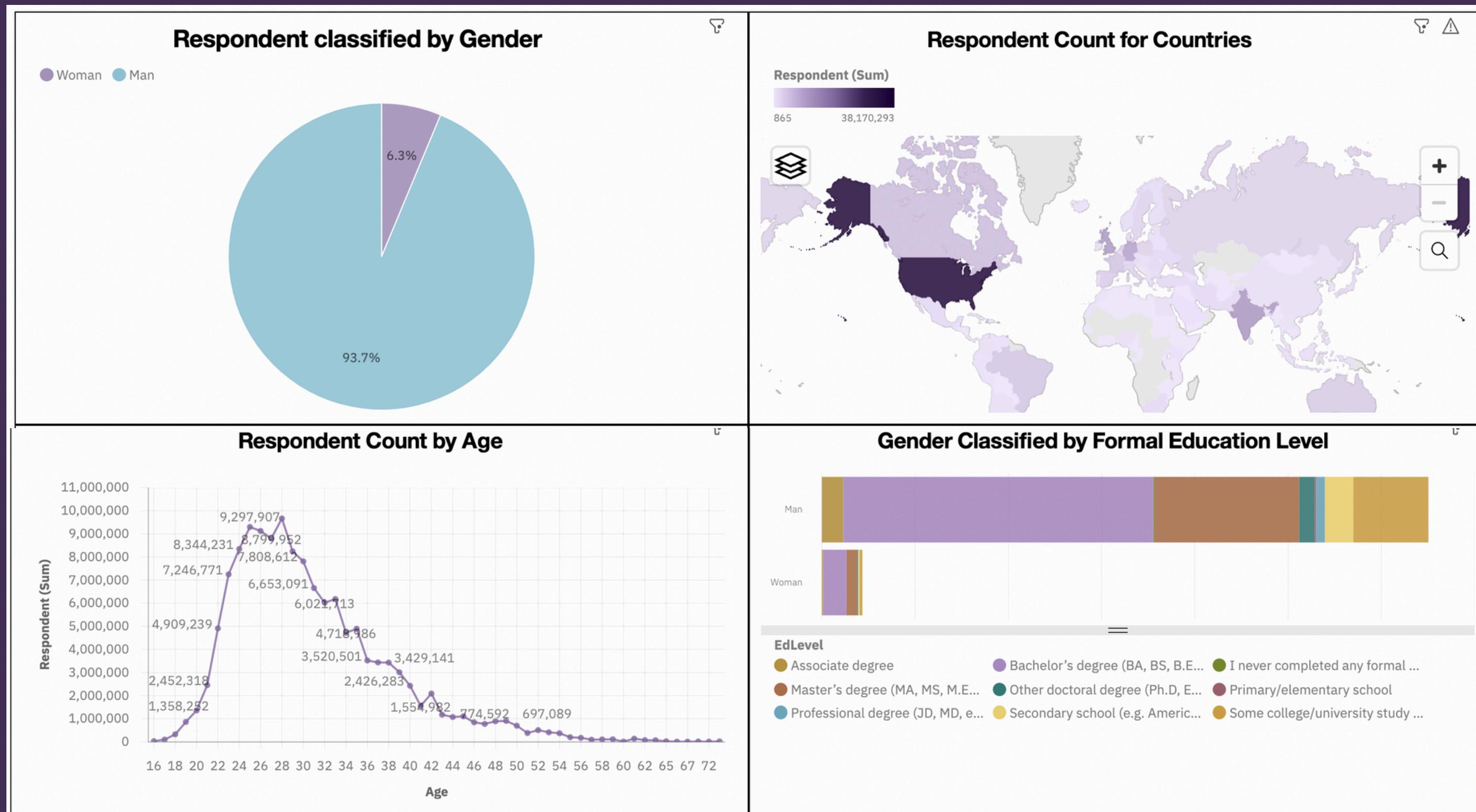
Respondent (Sum)  
11,517,716 57,310,840



# Future Technology Trend



# Demographics



# OVERALL FINDINGS & IMPLICATIONS

## Findings

- Approximately 94% of men dominate Tech.
- USA high percentage of tech users..
- Majority of coders are of the age group 24 to 30 years.
- Majority of coders have at least High school level formal education.
- Windows, Linux, AWS, Docker are top desired platforms to use in tech.

## Implications

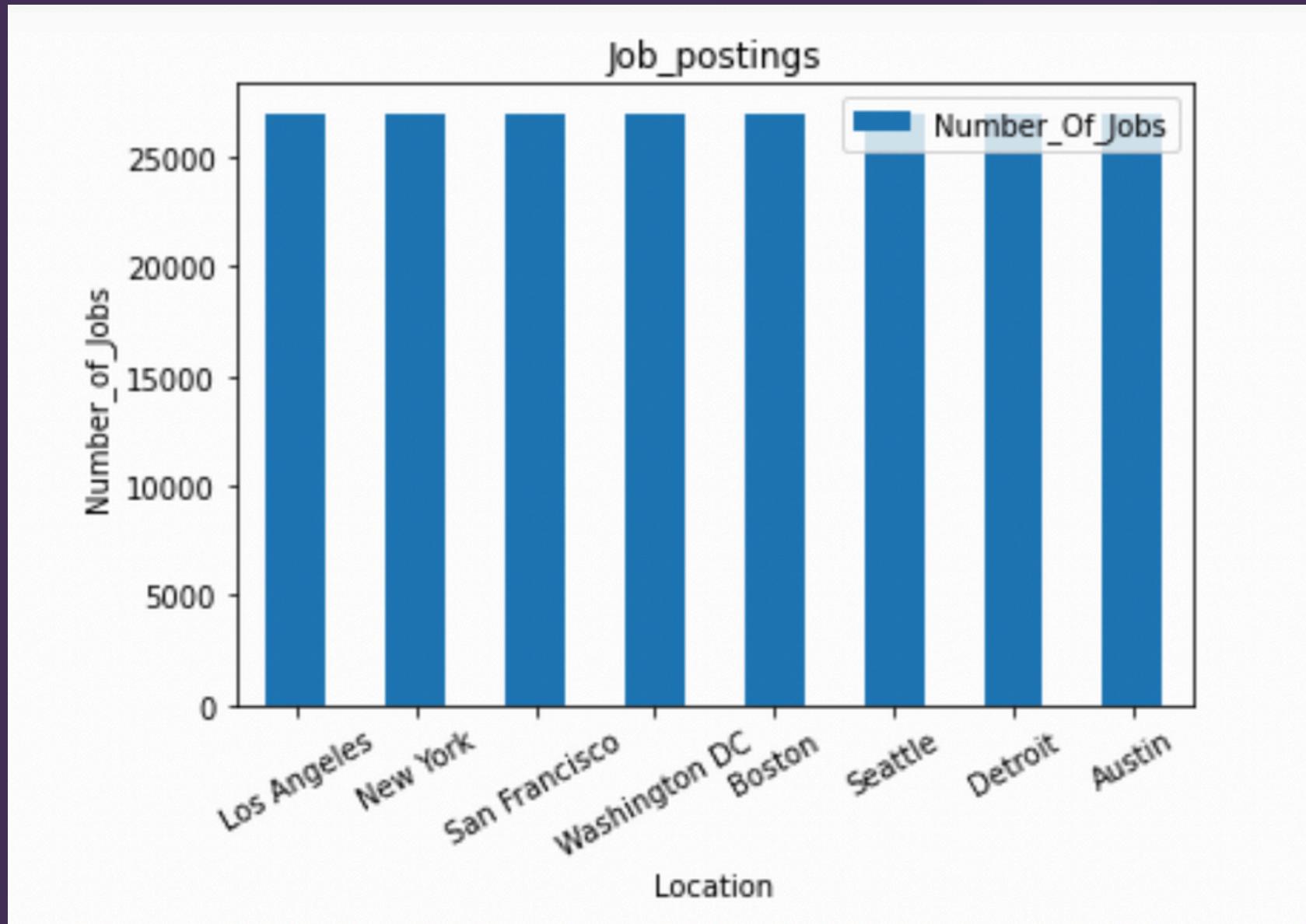
- Less women in Tech, widens gender equity gap.
- Leads to USA advancing in tech and innovation at fast rate compared to rest of the world.
- Next generation will be more advanced in tech languages and tools.
- Some formal education is needed to understand the basics of tech platforms and languages

# CONCLUSION and recommendations

- Technology languages, database and platforms are creating new advanced tools for problem solving and analysis.
- Innovation in technology is creating more career opportunities, especially in more developed countries.
- SQLite and Redis database will be more popular in tech innovation and tools.
- Women and minorities are underrepresented Tech, gender is present in the tech space.
- Data is skewed to more developed countries, future studies should be global centered.

# APPENDIX

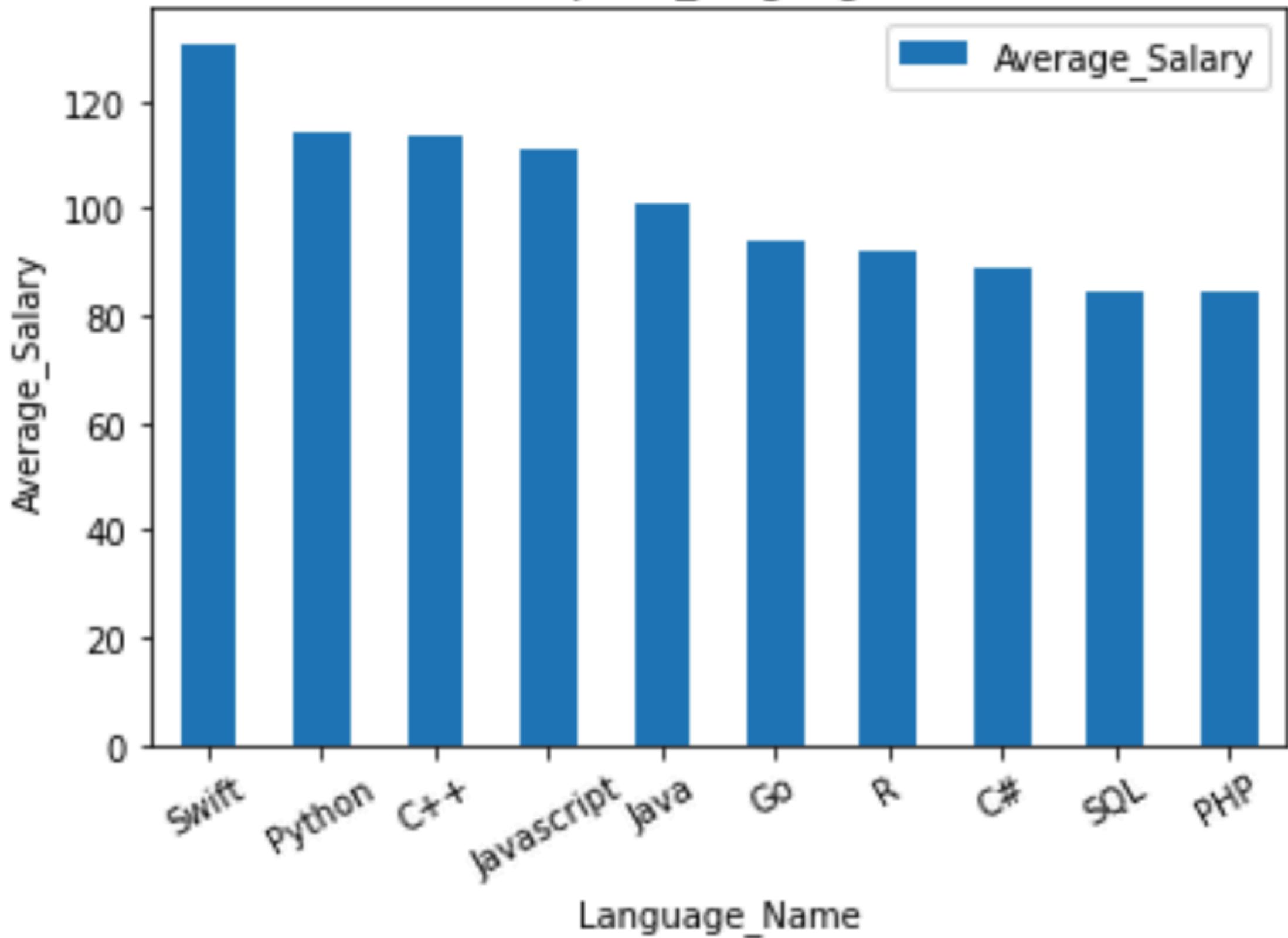
Tech Job postings are shared equal across all studied Cities



## JOB\_POSTINGS:

[https://github.com/Borotho/Solution\\_spoon/blob/d0602b6446f17b65ddd42ee0ff96120f71129320/Collecting\\_Jobs\\_data\\_Using\\_API-Questions%20\(1\).ipynb](https://github.com/Borotho/Solution_spoon/blob/d0602b6446f17b65ddd42ee0ff96120f71129320/Collecting_Jobs_data_Using_API-Questions%20(1).ipynb)

## Popular\_languages



Tech employees who use Swift, Python, C++ get higher salary on average.

### POPULAR LANGUAGES:

[https://github.com/Borotho/Solution\\_spoon/blob/d0602b6446f17b65ddd42ee0ff96120f71129320/Web-Scraping-Lab.ipynb](https://github.com/Borotho/Solution_spoon/blob/d0602b6446f17b65ddd42ee0ff96120f71129320/Web-Scraping-Lab.ipynb)