Technology Analysis

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OUTLINE

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- Methodology
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  - Dashboard
- Discussion
  - Findings & Implications
- Conclusion
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EXECUTIVE SUMMARY

- Current Technology Usage Trend
  - Language
  - Database
  - Platform
  - Web frame
- FutureTechnology Trend
  - Language
  - Database
  - Platform
  - Webframe
- Demographics Survey
- Country & Gender Difference

INTRODUCTION

- Analyze the technology trend in software and web development among developers around the world
- Purpose of this analysis
  - Identify the main programming languages, databases, platforms and web framework skills currently and in the future
  - Identify skills requirements for the future
- Audience for this presentation
  - Programmers
  - IT industry leaders
  - Computer science students

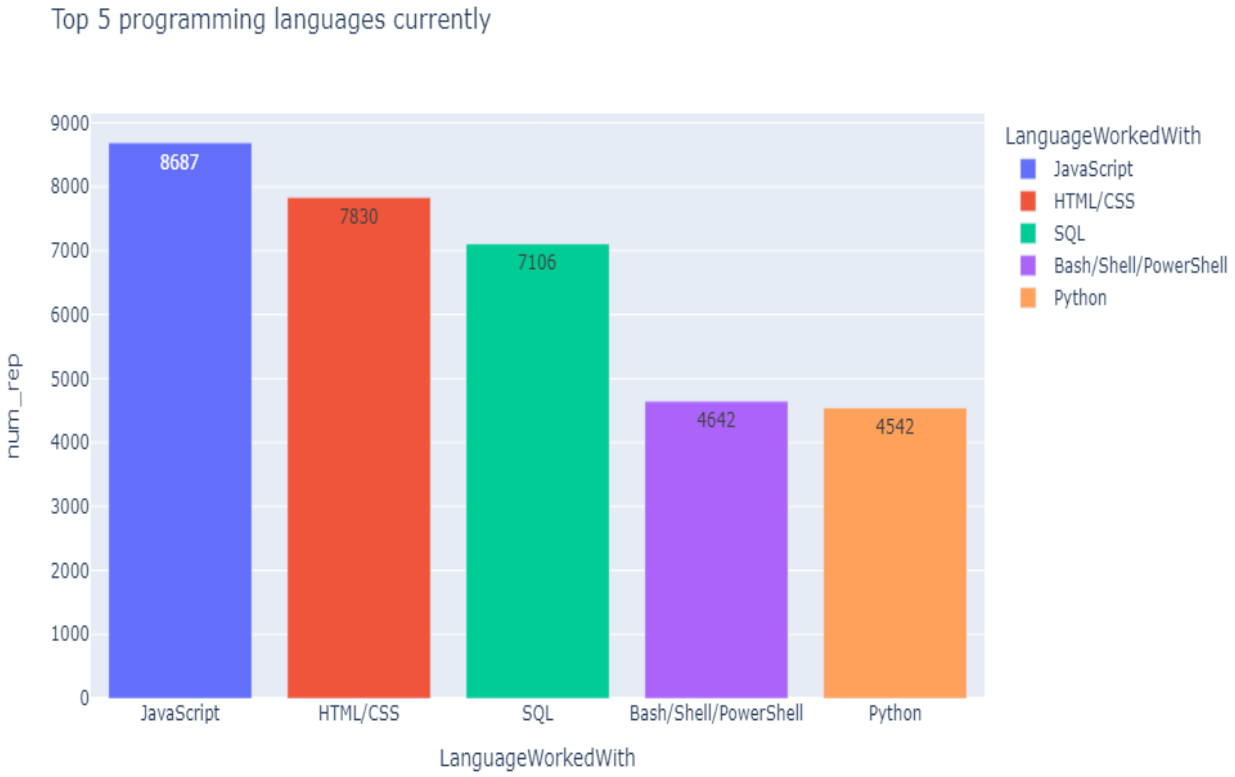
METHODOLOGY

- Data Collection (Sources)
  - Stack overflow developer 2019 survey
  - GitHub job postings
  - Programming languages annual salary
- Data Wrangling
  - Data Exploration
  - Data Cleaning
- Data Visualization
  - Python (pandas, pyplot express)
  - IBM Cognos
- Presentation

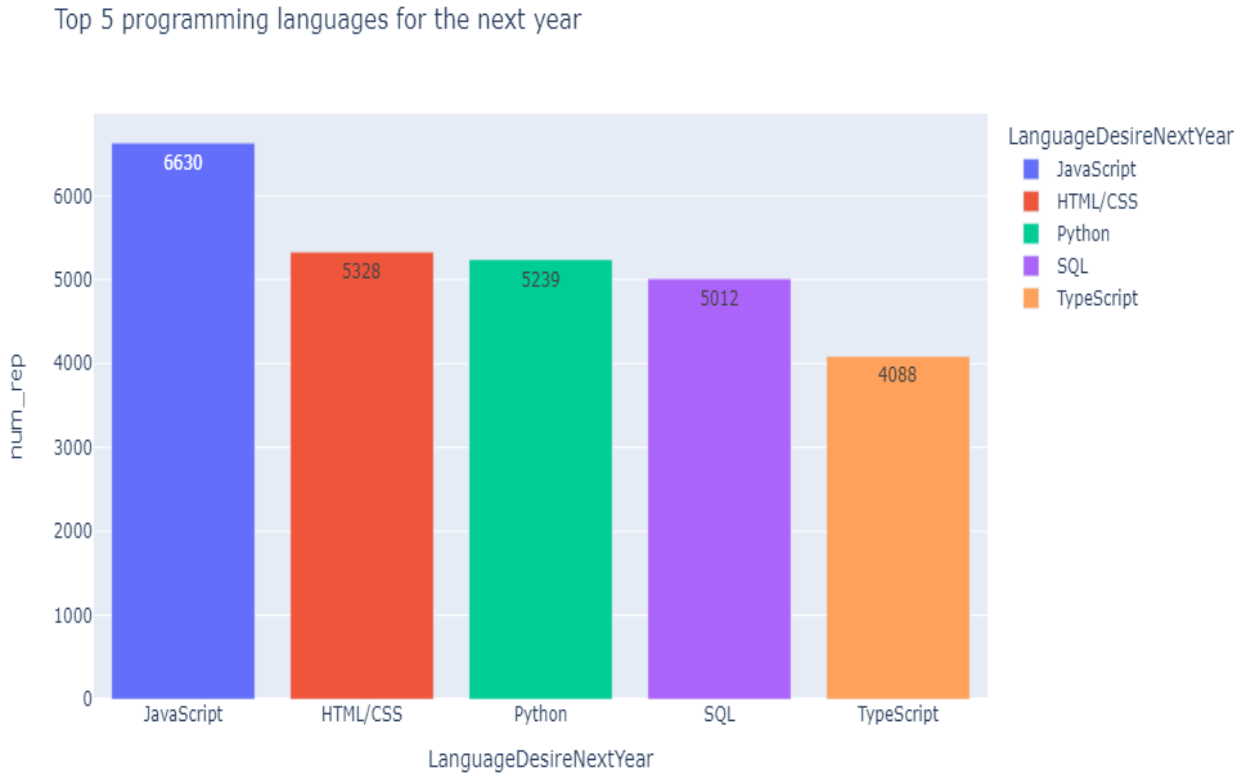
RESULTS

PROGRAMMING LANGUAGE TRENDS

Current Year



Next Year



IBM Developer

SKILLS NETWORK

PROGRAMMING LANGUAGE TRENDS - FINDINGS & IMPLICATIONS

Findings

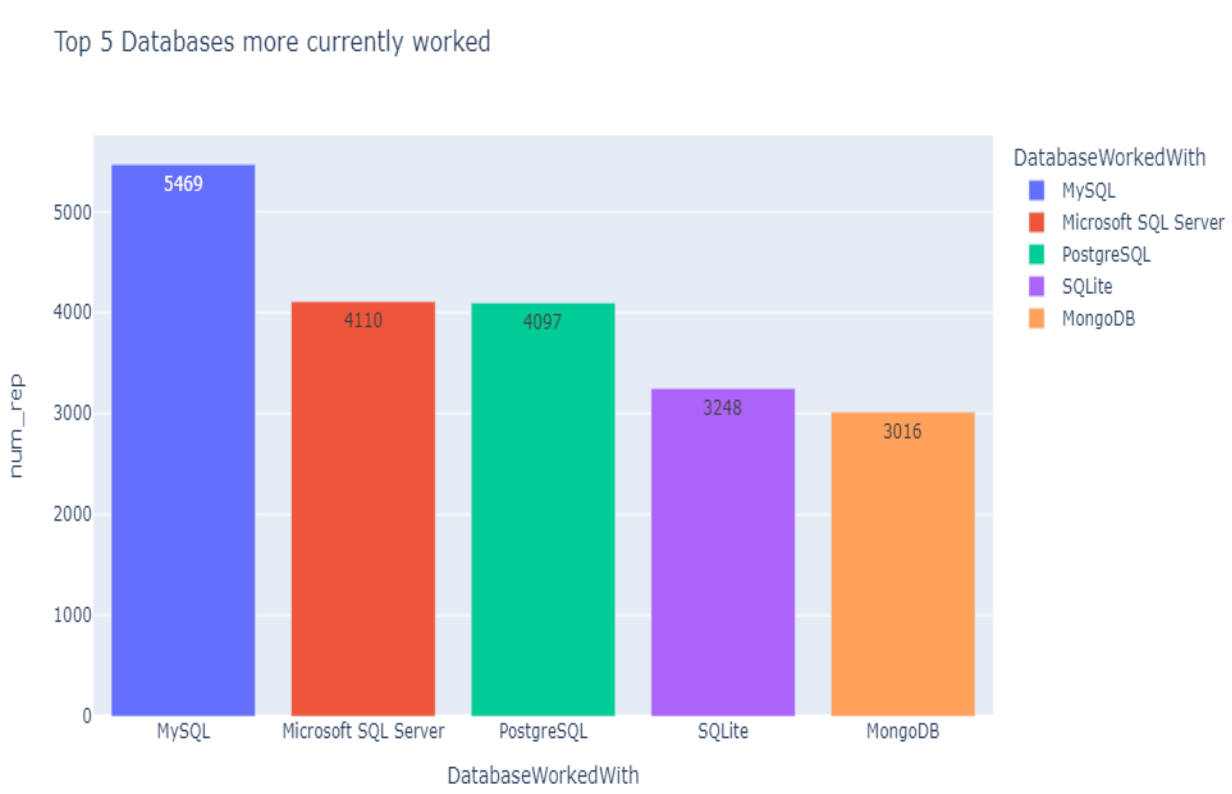
- Javascript, HTML/CSS are maintained for the following year
- SQL remains crucial for development and developers.
- Python and TypeScript get a surge in popularity for the following year.

Implications

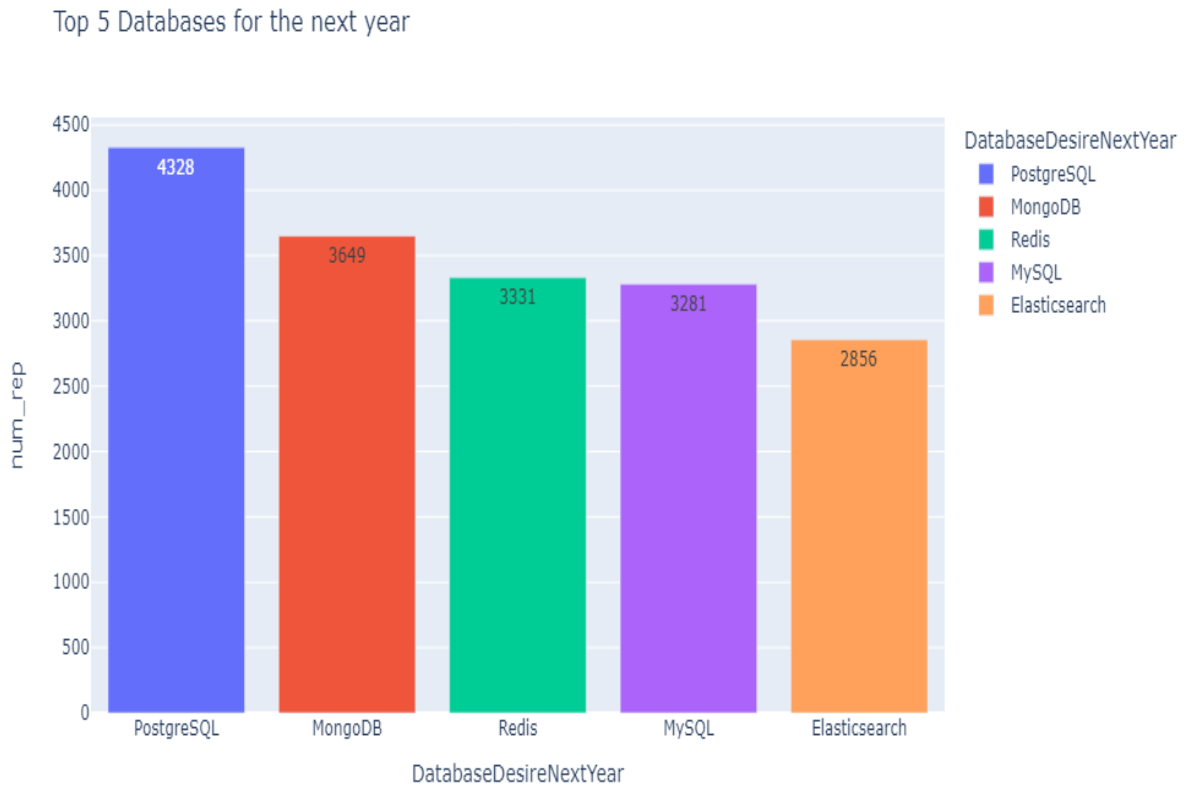
- Web development continues to be in high demand for the following year
- Python is trending for the next year up 2 positions
- Bash/Shell/Powershell lowers its popularity for the next year but is still used.

DATABASE TRENDS

Current Year



Next Year



DATABASE TRENDS - FINDINGS & IMPLICATIONS

Findings

- MySQL is currently the preferred database.
- MongoDB and Redis are trends for developers in the coming year.
- PostgreSQL becomes the preferred database for next year and will be the trending relational database.

Implications

- Relational databases are most chosen for development today
- Non-relational databases will have preference for the following year in a significant way.
- SQL databases remain a trend for the next year.

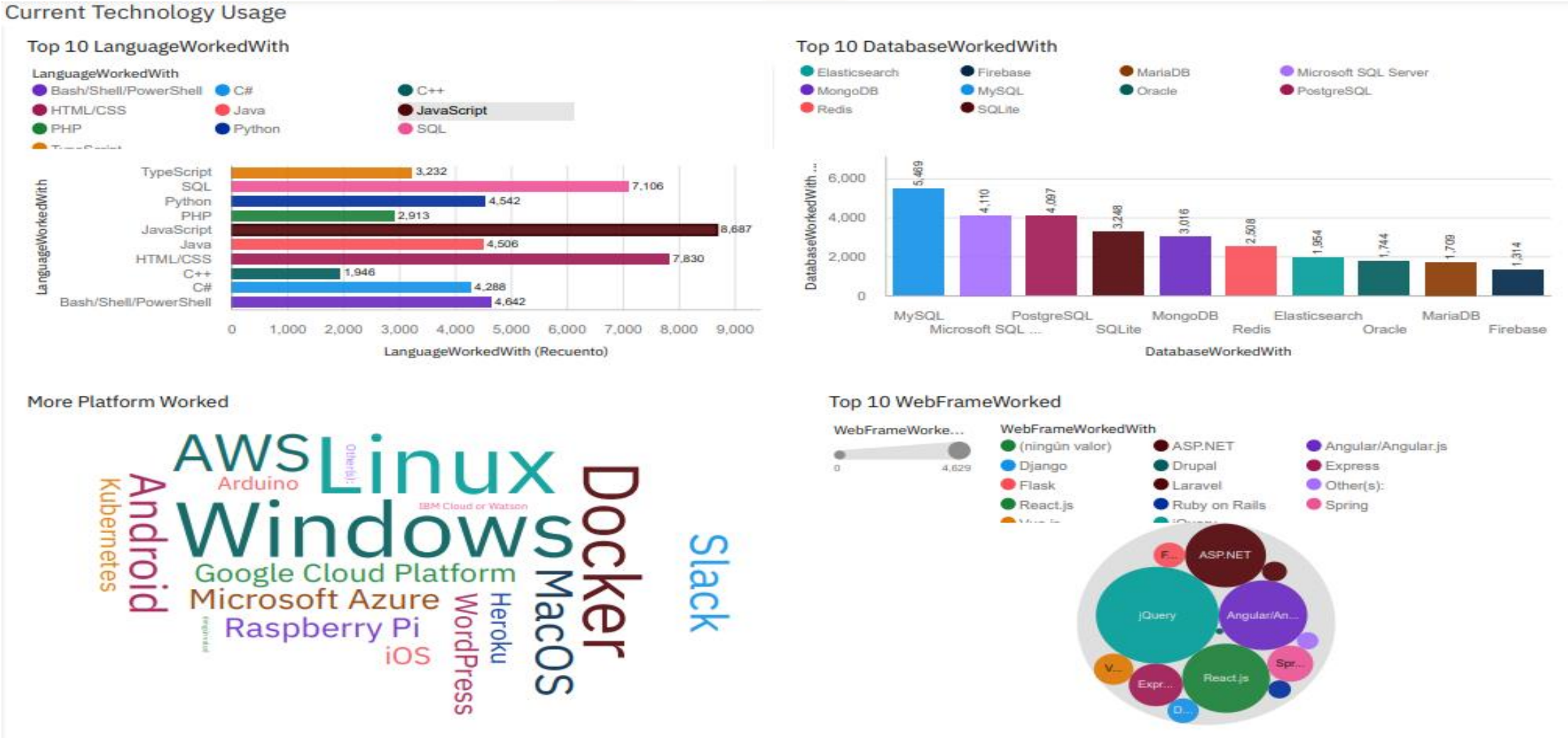
DASHBOARD

LINK IBM:
https://sa1.ca.analytics.ibm.com/bi/?perspective=dashboard&pathRef=.my_folders%2FDashboard%2BCapstone&action=view&mode=dashboard&subView=model0000017edf66351e_00000001

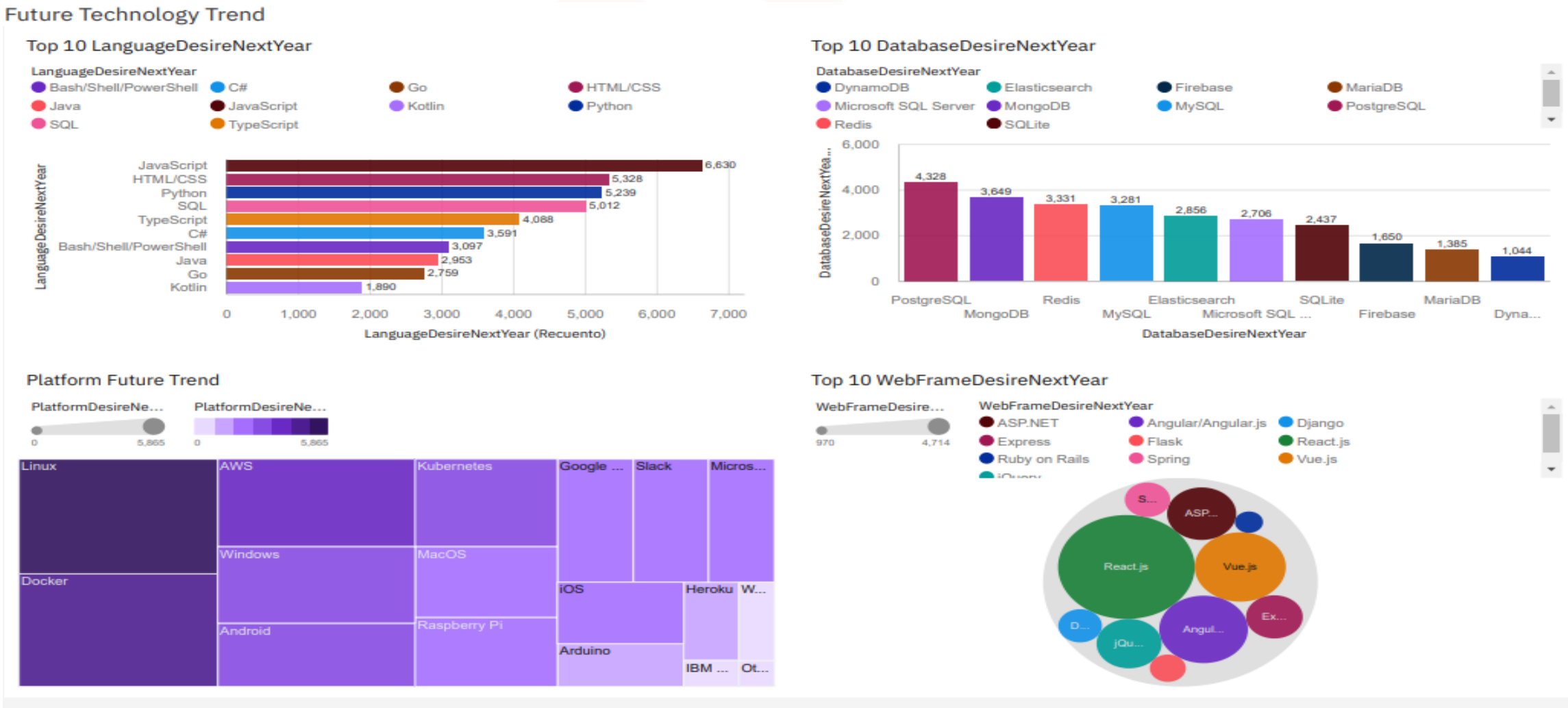
Maybe you need the Account IBM for visualize the dashboard(Problems with IBM Cloud).

GITHUB:
https://github.com/ericsiage/Dashboard_CapstoneProject_IBM_Cognos/blob/main/_%20Dashboard%20Capstone.pdf

Current Technology Usage



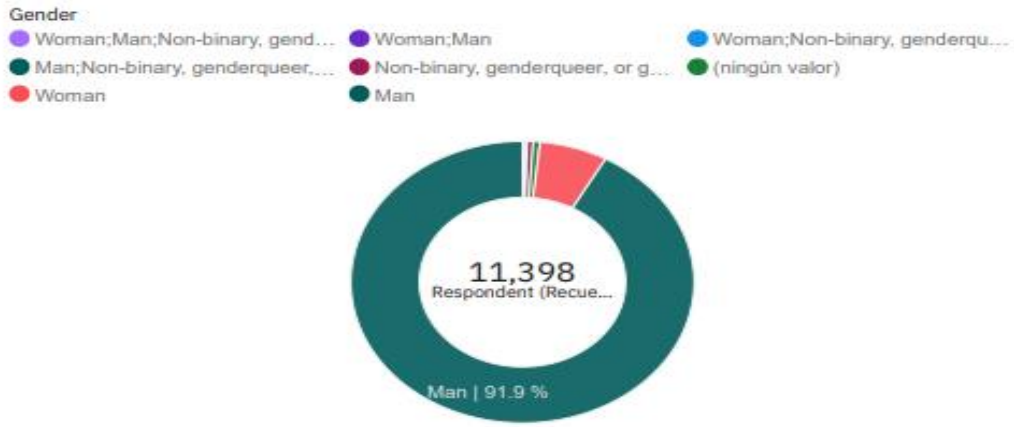
Future Technology Trend



Demographics

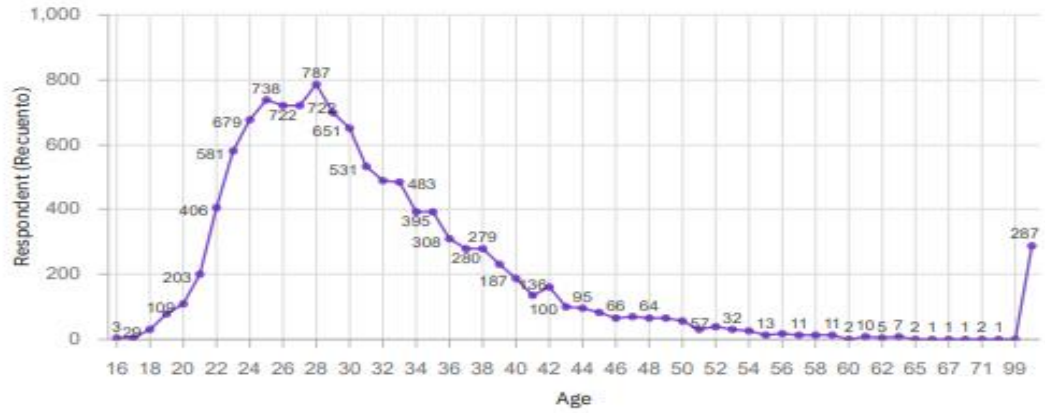
Demographics

Respondent classified by Gender.

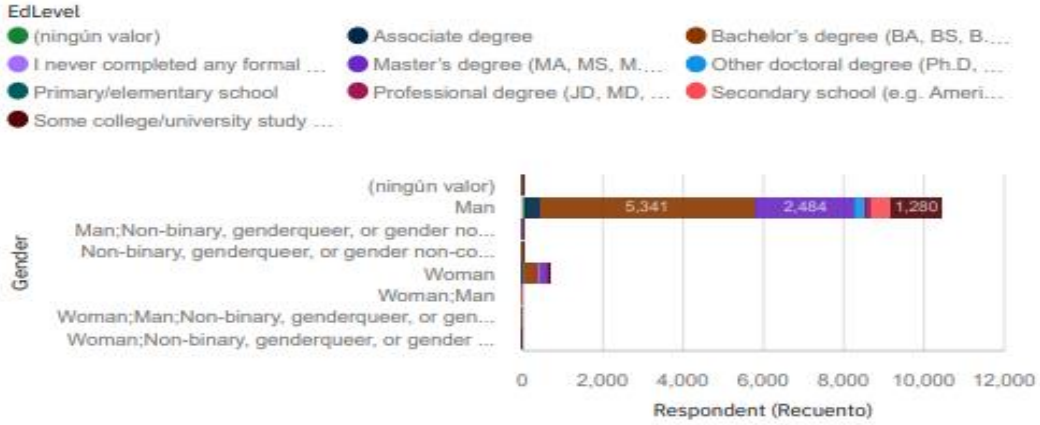


Respondent por Country y Country

Respondent Count by Age



Respondent por Gender



DISCUSSION

- Future trends
- Discrimination by gender?
- Is there discrimination according to the level of education?
- Number of developers per country.

OVERALL FINDINGS & IMPLICATIONS

Findings

- Trends change.
- Docker and AWS are trending cloud platforms for the coming year.
- Javascript frameworks are still trending for the following year.

Implications

- Web development remains in trend
- Most developers have up to Baccalaureate.
- The age of developers rises to 28 years and begins to fall.
- The majority of respondents are men (91%).

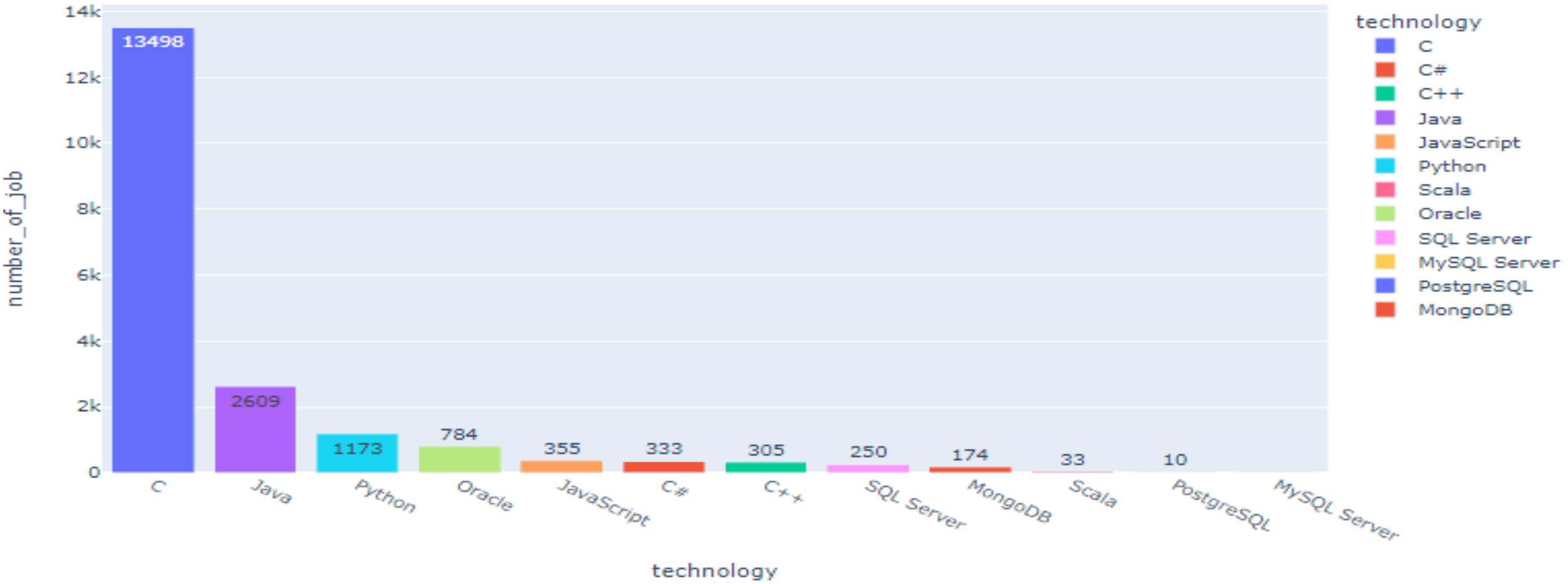
CONCLUSION

- Trends change every year but Web Development remains stable leaving languages and frameworks at the top.
- There is a lot of superiority of male developers (91%) than women.
- There is no discrimination by level of education, but it is important to have up to Baccalaureate.
- The number of developers decreases from the age of 28 onwards.
- Most are from the United States.

APPENDIX

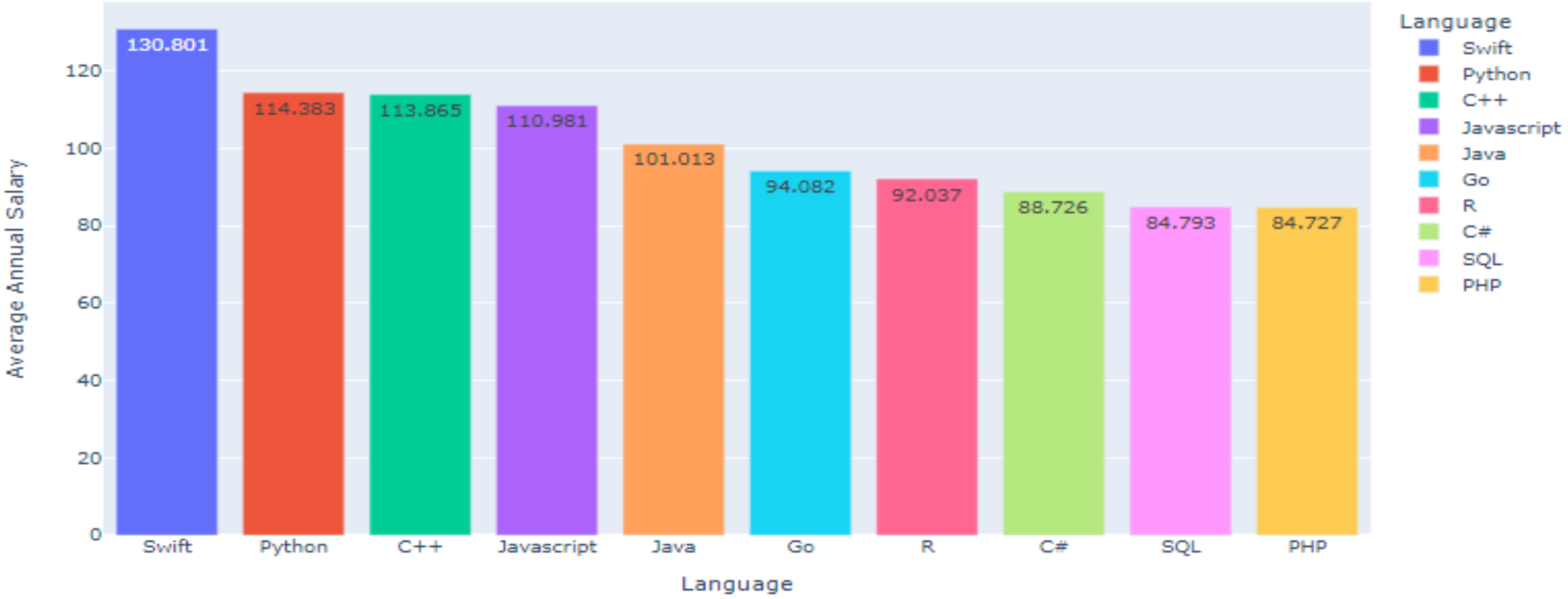
- IBM Cognos Dashboard Embedded (CDE) is an AI-fueled business intelligence service that supports the entire data analytics cycle, from discovery to operationalization. It provides users with data discovery capabilities to visually explore and interact with their data to identify the key insights for improving data driven decisions. Users can perform data discovery and then quickly assemble that information into interactive, visually appealing dashboards; all without the need of formal training.

GITHUB JOB POSTINGS



Data: https://cf-courses-data.s3.us.cloud-object-storage.appdomain.cloud/IBM-DA0321EN-SkillsNetwork/labs/module%201/Accessing%20Data%20Using%20APIs/jobs.json

POPULAR LANGUAGES



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