STACK OVERFLOW DEVELOPER SURVEY(2019)- Data Analysis

MINTU VIPIN JOY

12 APRIL 2024

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SKILLS NETWORK

OUTLINE

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

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EXECUTIVE SUMMARY

- Data Cleaning, EDA
- Current Technology Usage Trend
  - Language
  - Database
  - Platform
  - Web Frame
- Future Technology Usage Trend
  - Language
  - Database
  - Platform
  - Web Frame
- Demographic Survey
  - Gender
  - Country
  - Age
  - Education Level

INTRODUCTION

- DataSet - The 2019 Stack Overflow Developer Survey
  - Responders - 90,000 developers
  - Analysing - Programming Languages, Databases, Platform, Web frame
  - Demographics – Gender, Country, Age, Education level
- Target Audience
  - IT Professionals
  - Anyone interested in IT
  - Students
- Significance of predicting the trend

METHODOLOGY

- Collect survey data & explore its content
  - Web Scraping
  - APIs.
  - Request library.

- Data Preprocessing & Exploratory data analysis
  - Python

- Data Visualization
  - Highlight distribution of data, relationships, the composition and
  - comparison of data- python

- Dashboard
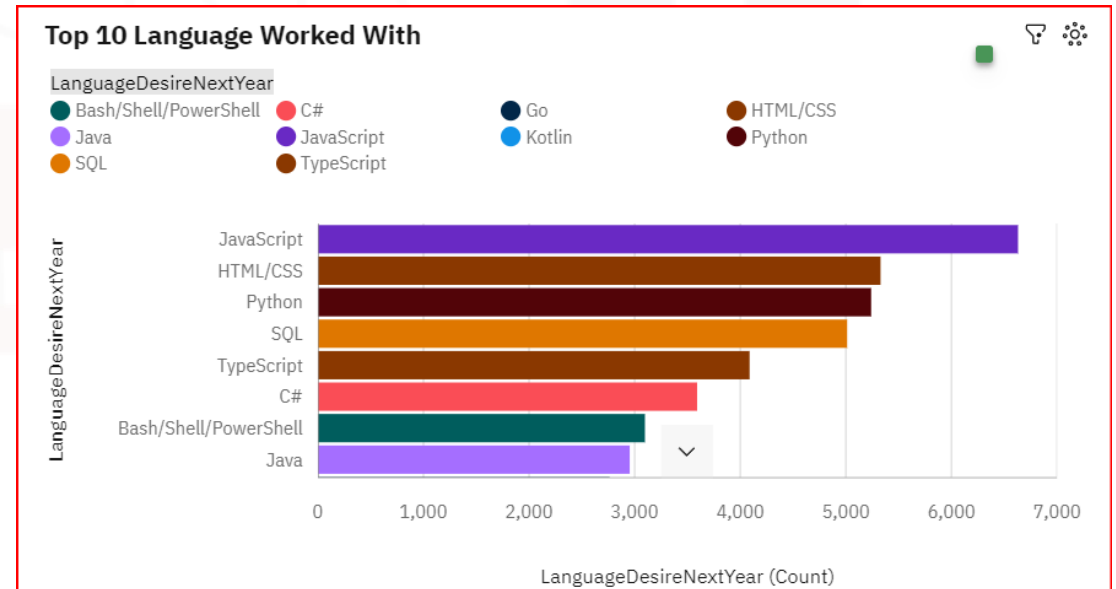 - IBM Cognos Analytics

RESULTS

PROGRAMMING LANGUAGE TRENDS

Current Year
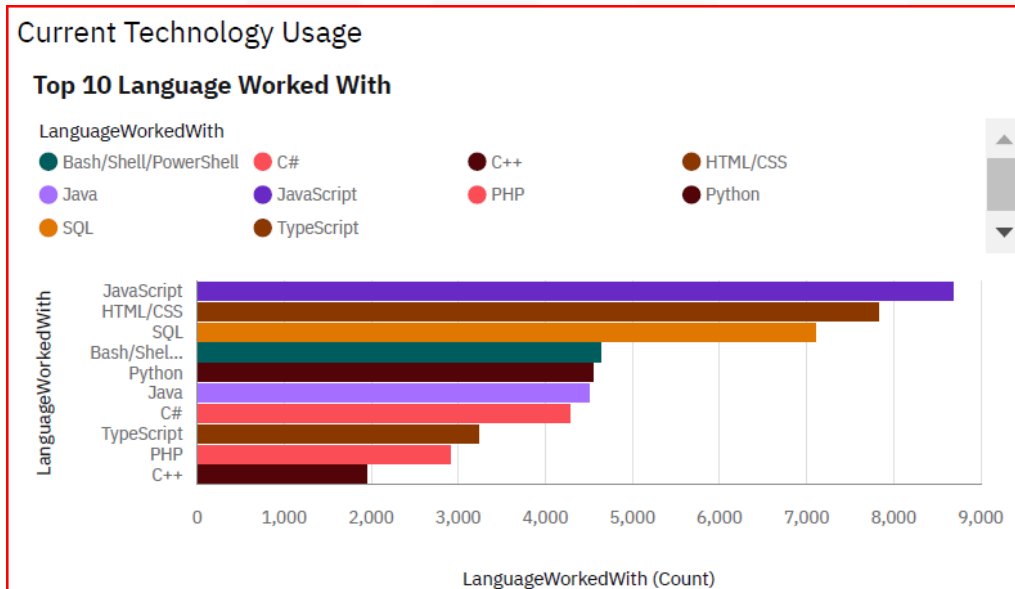
Next Year

PROGRAMMING LANGUAGE TRENDS - FINDINGS & IMPLICATIONS

Findings

- JavaScript is top trending in the world
- Python is more popular
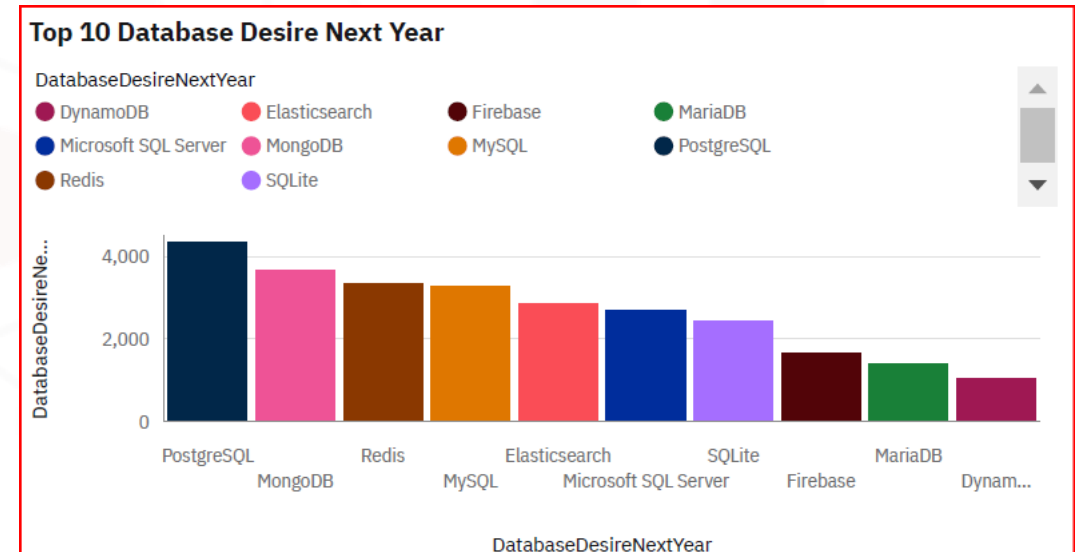- HTML/CSS and SQL still has great portion in language usage trend

Implications

- Web developments and Web developers are still in high demands
- Python is the new trending language,
- especially popular in AI fields
- JavaScript and TypeScript are crucial to learn for developers

DATABASE TRENDS

Current Year
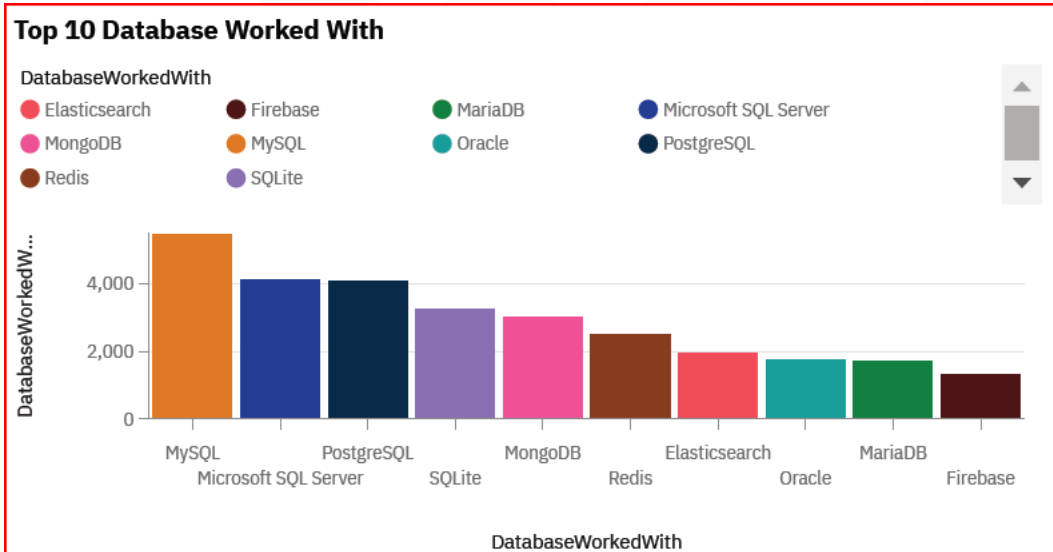
Next Year

DATABASE TRENDS - FINDINGS & IMPLICATIONS

Findings

- MySQL as most used database
- Lack of interest in Microsoft SQL Server and SQLite
- Increasing interest in PostgreSQL and MongoDB

Implications

- Microsoft SQL Server and SQLite losing ground in the market
- PostgreSQL and MongoDB establishment in the market
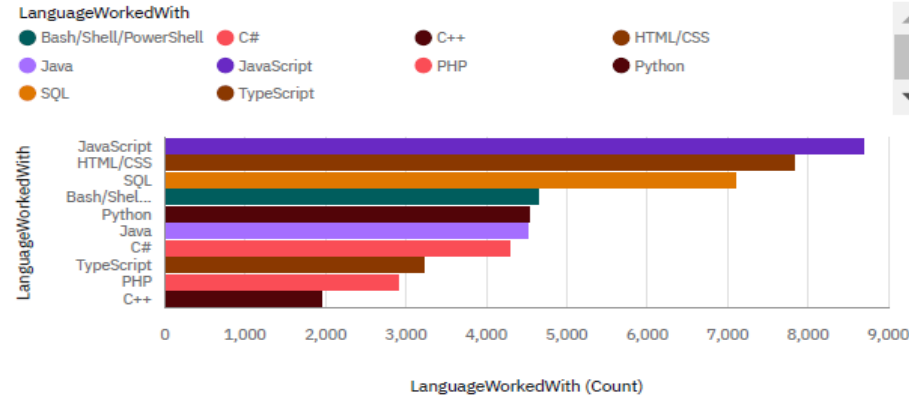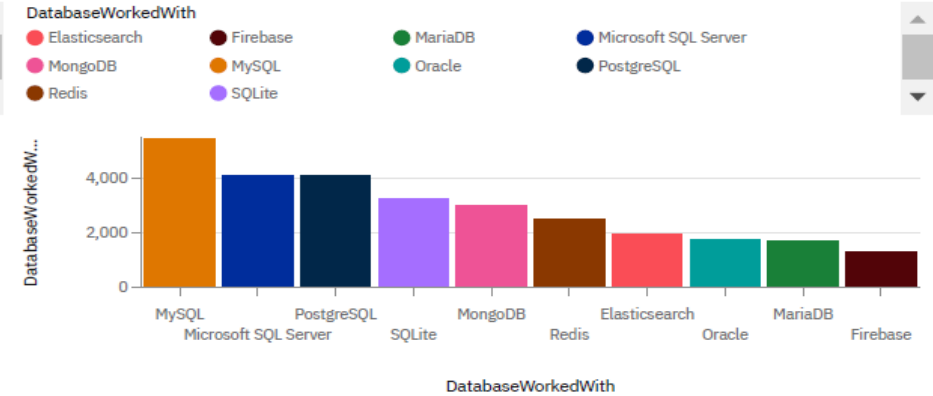- Open source databases are preferred

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DASHBOARD

Dashboard

DASHBOARD TAB 1
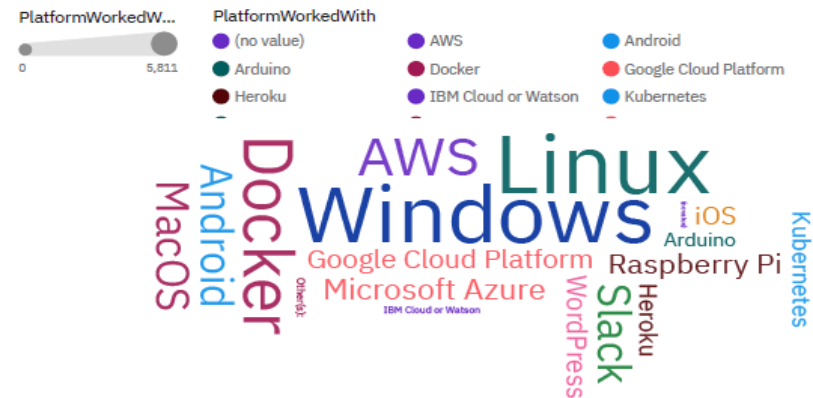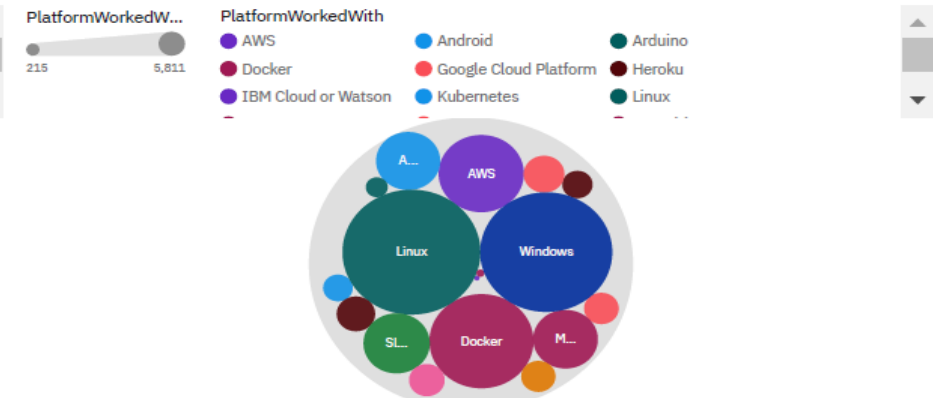
DASHBOARD TAB 2

Future Technology Trend.
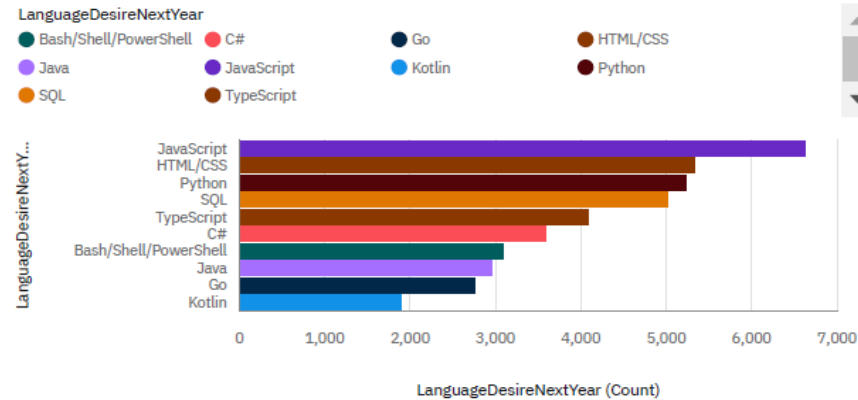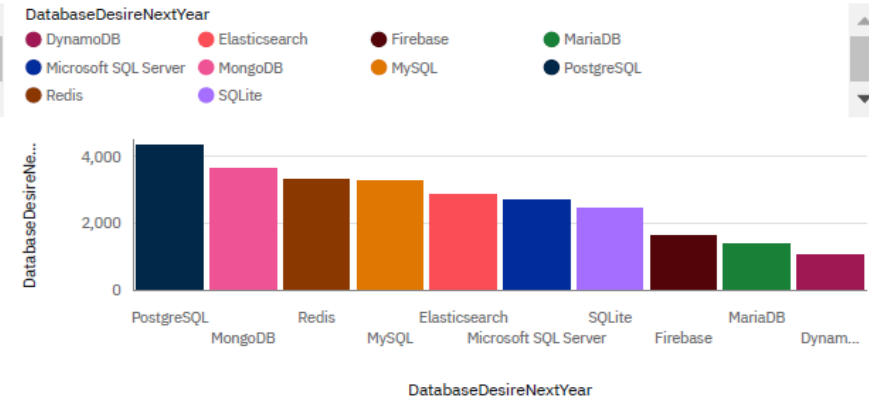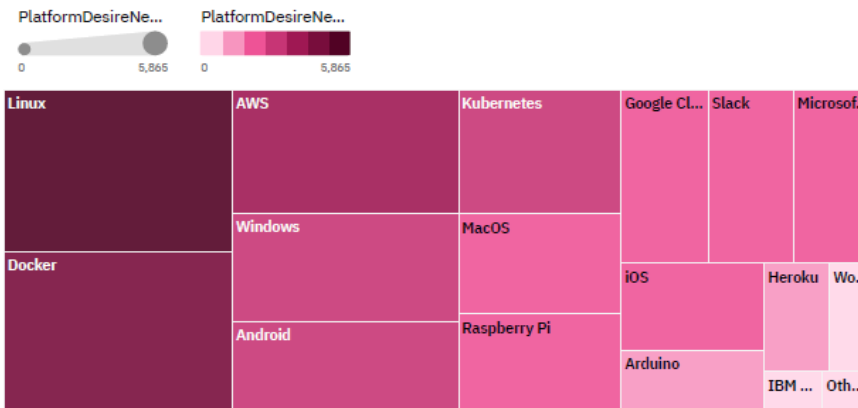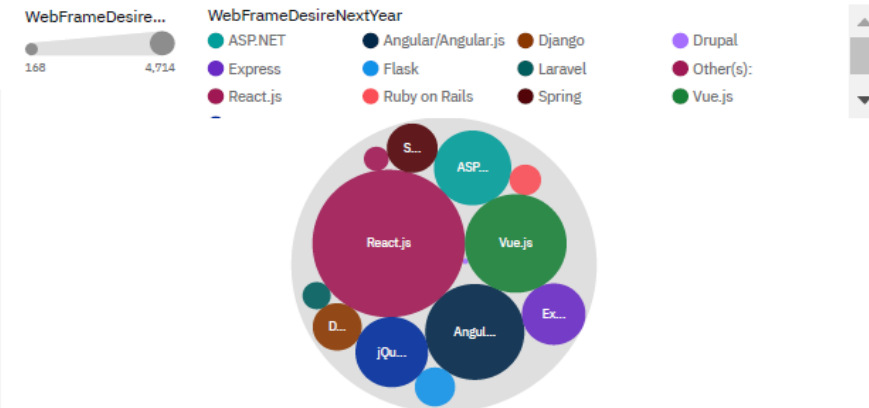
DASHBOARD TAB 3
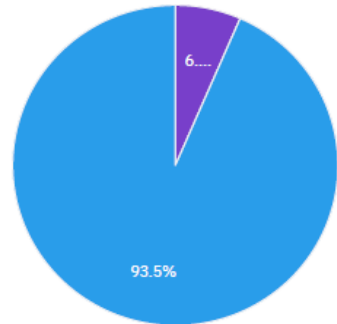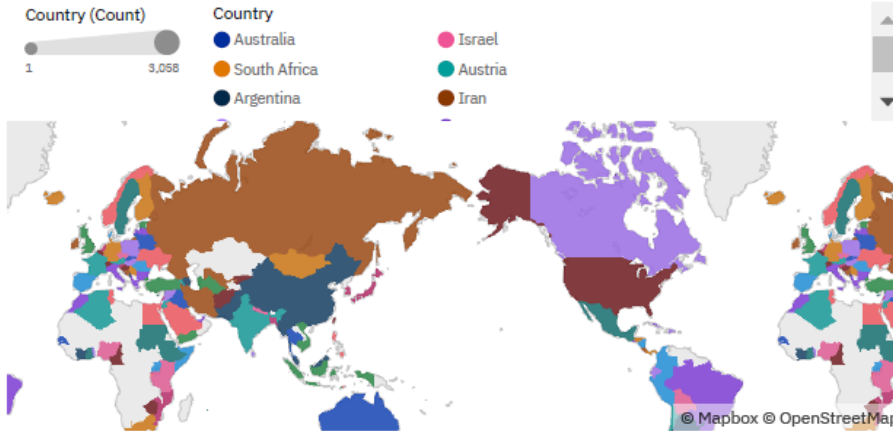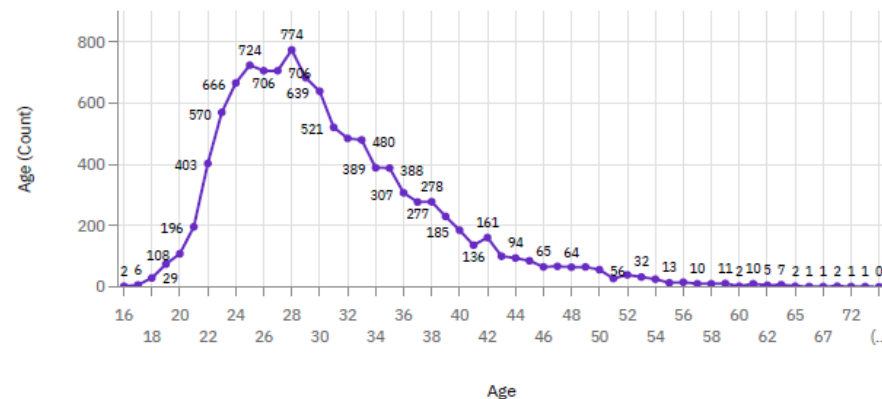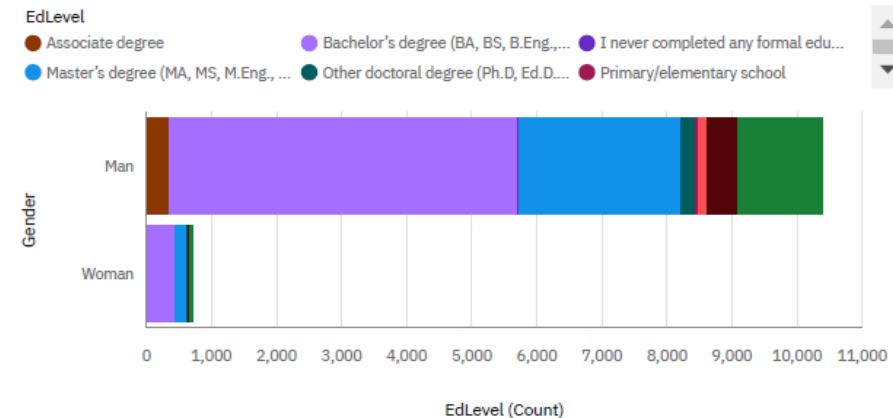
DISCUSSION

- Current & Future Technology Usage Trend

- Gender, Age, Country and Education Discrimination in IT Industry

OVERALL FINDINGS & IMPLICATIONS

Findings

- JavaScript widely used and TypeScript getting popular

- Developers mostly located in developed countries

- There are extreme gender and age

discrimination

Implications

- JavaScript and TypeScript web

frames gaining fans

- Young developers without postgrad studies on its majority

- Gender gap and age gap will affect job hiring

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CONCLUSION

- Current & Future Technology Usage Trend
  - Programming Language, Database, Platform and Web frame
- Gender, age, country, and education significantly influence workforce diversity, skills development, and market dynamics in the IT industry
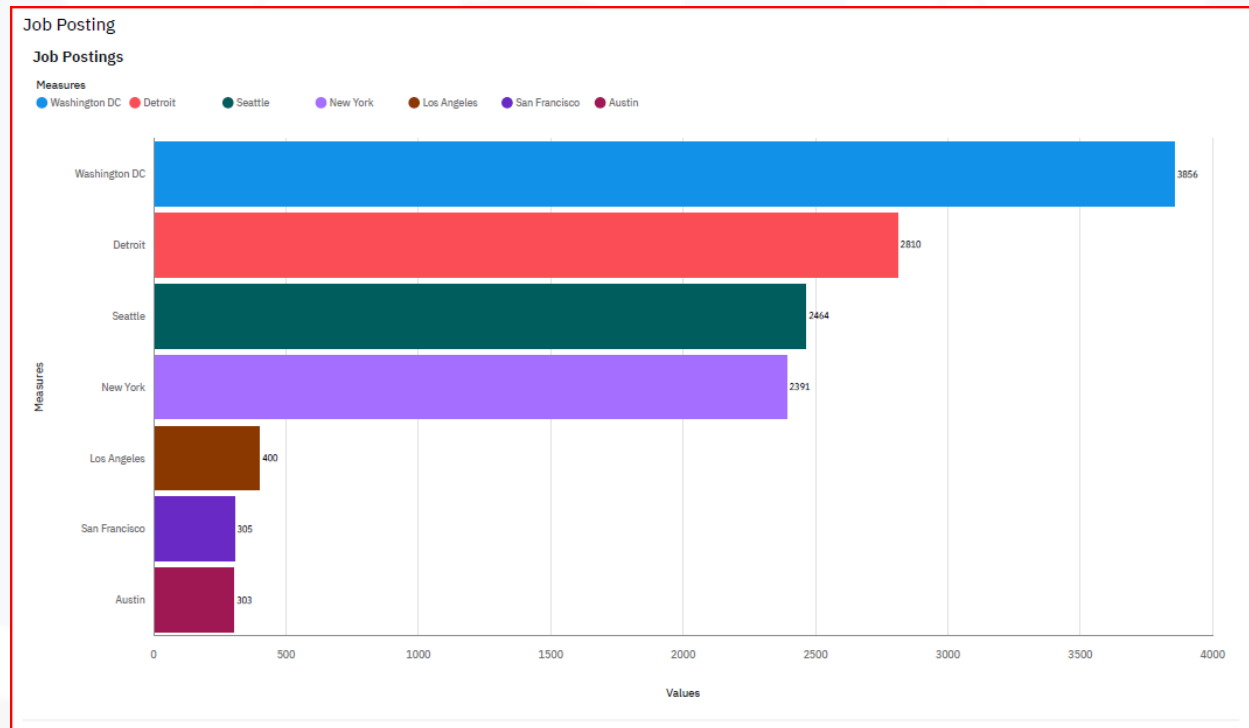
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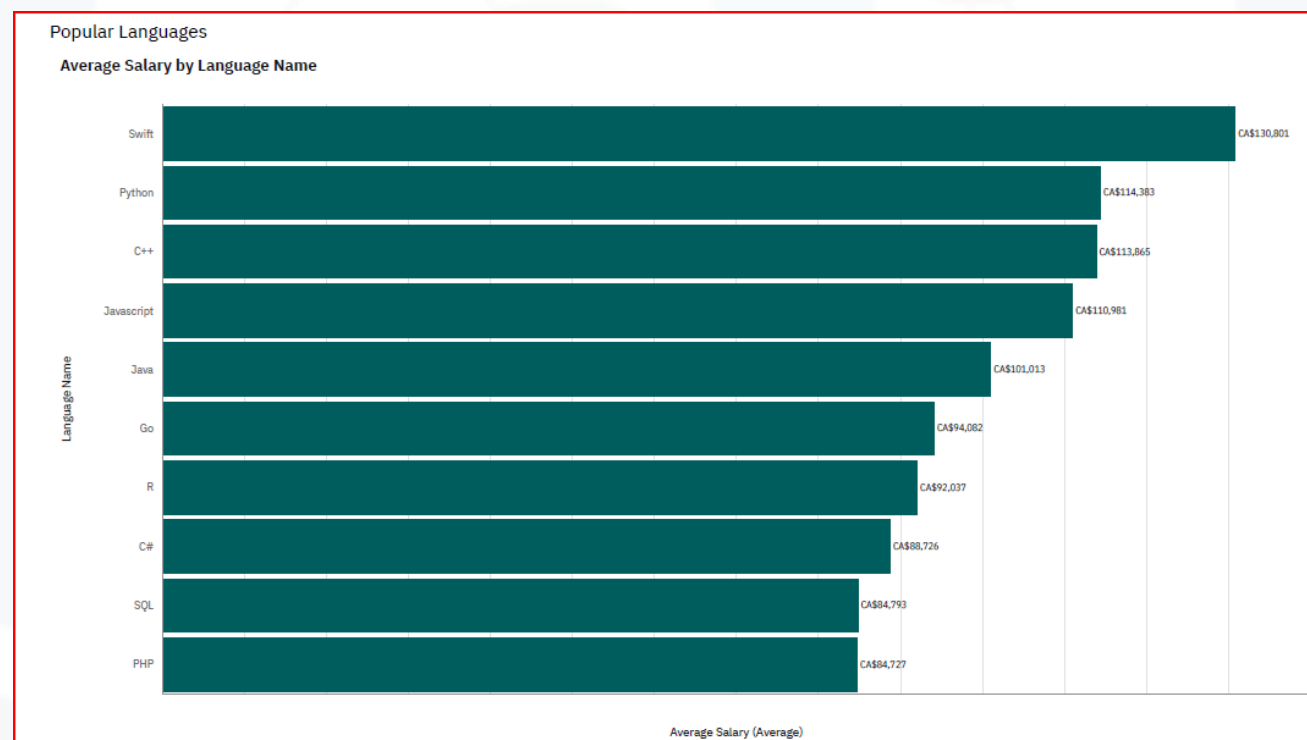SKILLS NETWORK

APPENDIX

IBM Cognos Analytics

IBM Cognos Analytics is a comprehensive business intelligence and analytics platform that enables organizations to make data-driven decisions. It offers powerful reporting, dashboarding, and data visualization capabilities to uncover insights from diverse data sources
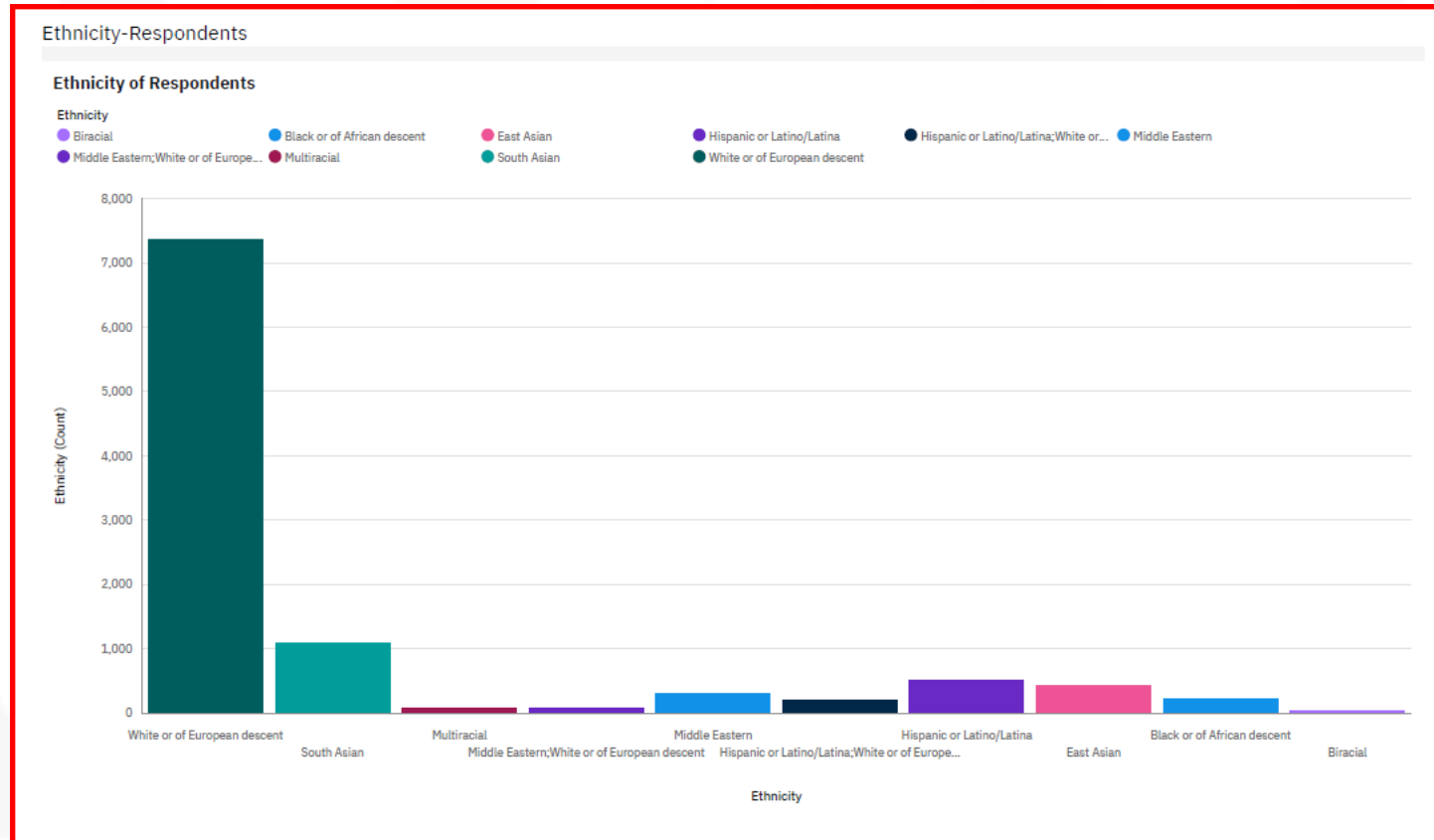
JOB POSTINGS

POPULAR LANGUAGES

Popular Languages

Average Salary by Language Name

Language Name	Average Salary
Swift	CA$130,801
Python	CA$114,383
C++	CA$113,865
Javascript	CA$110,981
Java	CA$101,013
Go	CA$94,082
R	CA$92,037
C#	CA$88,726
SQL	CA$84,793
PHP	CA$84,727

Average Salary (Average)

Ethnicity of Respondents

Thank you