Capstone Project

Nick Vergados

Aug 3, 2023

OUTLINE

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

IBM Developer

SKILLS NETWORK

EXECUTIVE SUMMARY

- Top 10 Software Languages
- Top 10 Databases
- Top 10 Platforms
- Top 10 Web Frames
- Top 10 trending Languages next year
- Top 10 trending Databases next year
- Top 10 trending Platforms next year
- Top 10 trending Web Frames next year

IBM **Dev**loper

SKILLS NETWORK

INTRODUCTION

- The dataset used was the Stack Overflow Developer Survey 2019

- Why? It is one of the largest developer focused open collaboration platforms currently in use

- Through our study we intend to answer some very interesting questions:
  - Top Current Technologies currently in use
  - Future Technology Trends
  - Current Demographics

IBM **Dev**eloper

SKILLS NETWORK

METHODOLOGY

- Stack Overflow's annual Developer Survey is the largest and most comprehensive survey of people who code around the world

- 90,000 developers took a 20-minute survey

- Survey was taken in 2019

- Top 5 sources of respondents were
  - Onsite messaging
  - Blog posts
  - Email lists
  - Meta posts
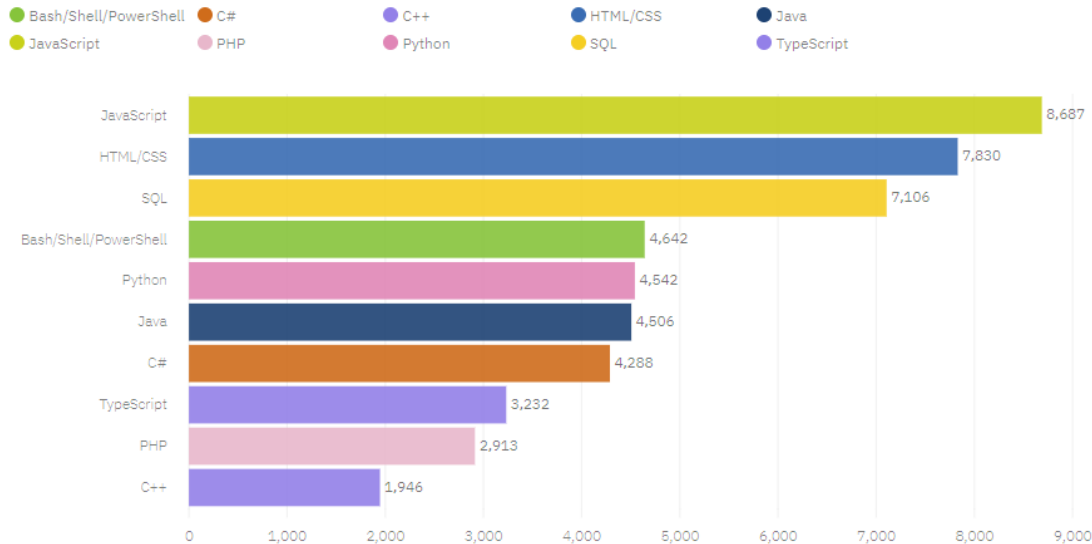 - Banner ads
  - Social media posts

RESULTS

- Over 90% of all coders/programmers are men

- The United States dominates the Technology Sector

- Most programmers are under the age of 40
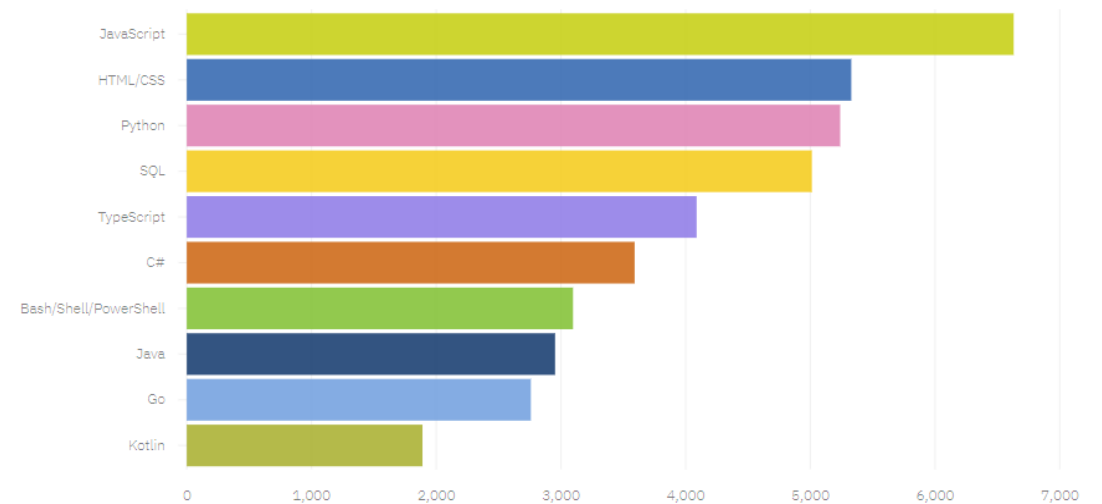
PROGRAMMING LANGUAGE TRENDS

Current Year

Next Year

PROGRAMMING LANGUAGE TRENDS - FINDINGS & IMPLICATIONS

Findings

- JavaScript is currently the most popular language
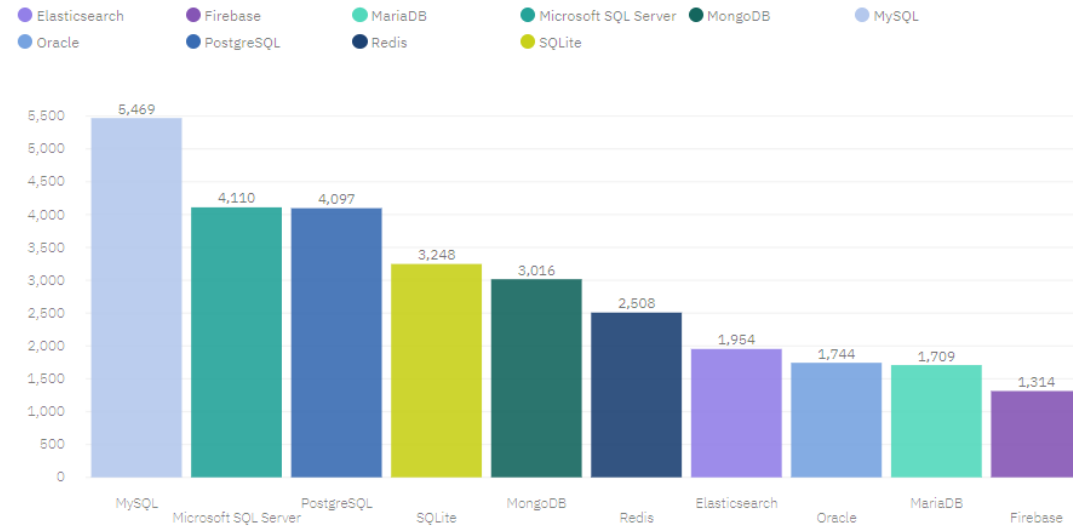
- HTML/CSS remains at number 2 followed by SQL

Implications

- Python will surpass SQL next year

- Go and Kotlin are gaining in popularity
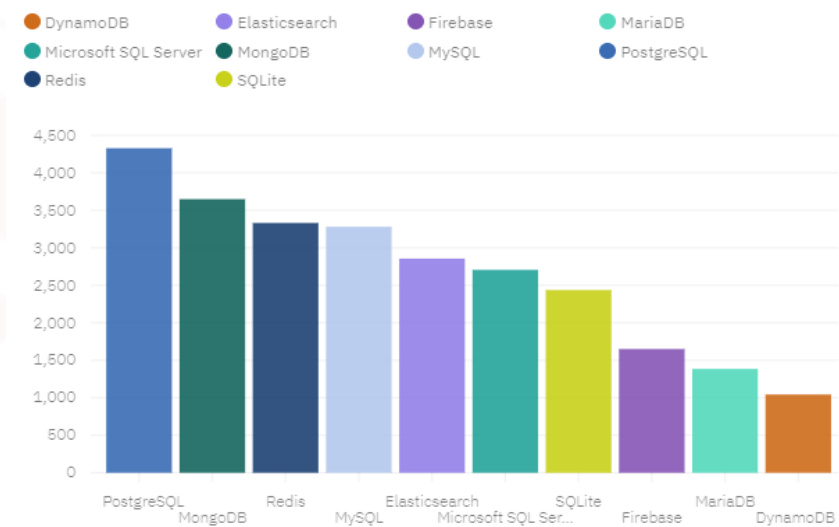
- SQL is decreasing in popularity

IBM Developer

SKILLS NETWORK

DATABASE TRENDS

Current Year

Top 10 Databases worked with

● Elasticsearch ● Firebase ● MariaDB ● Microsoft SQL Server ● MongoDB ● MySQL
● Oracle ● PostgreSQL ● Redis ● SQLite

Next Year

Top 10 Databases desired next year

● DynamoDB ● Elasticsearch ● Firebase ● MariaDB
● Microsoft SQL Server ● MongoDB ● MySQL ● PostgreSQL
● Redis ● SQLite

DATABASE TRENDS - FINDINGS & IMPLICATIONS

Findings

- MySQL is the most popular database

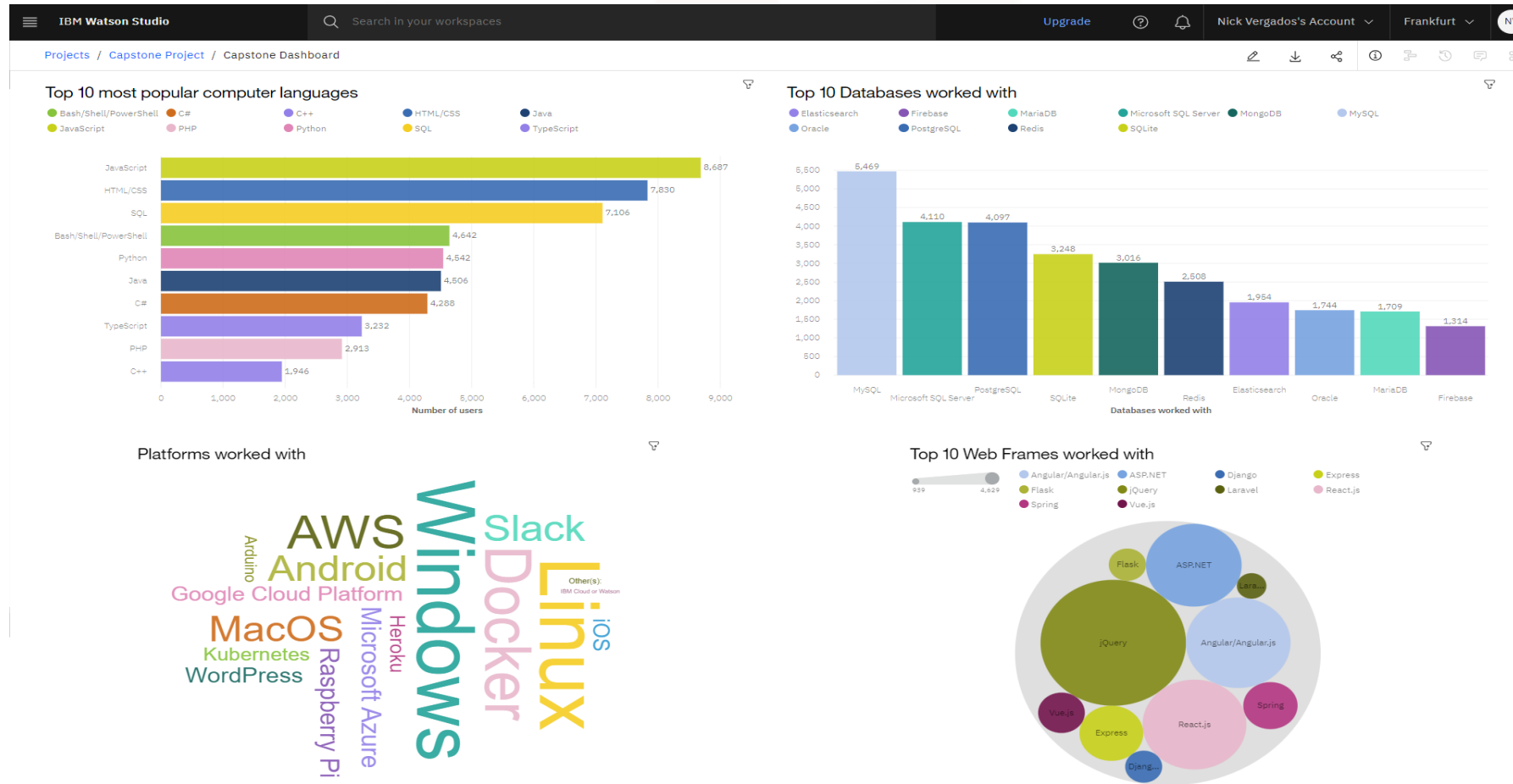- SQL Server and PostgreSQL are number 2 and 3

Implications

- PostgreSQL will become the most popular database

- MongoDB and Redia are increasing in popularity

- MySQL and Microsoft SQL Server are losing popularity
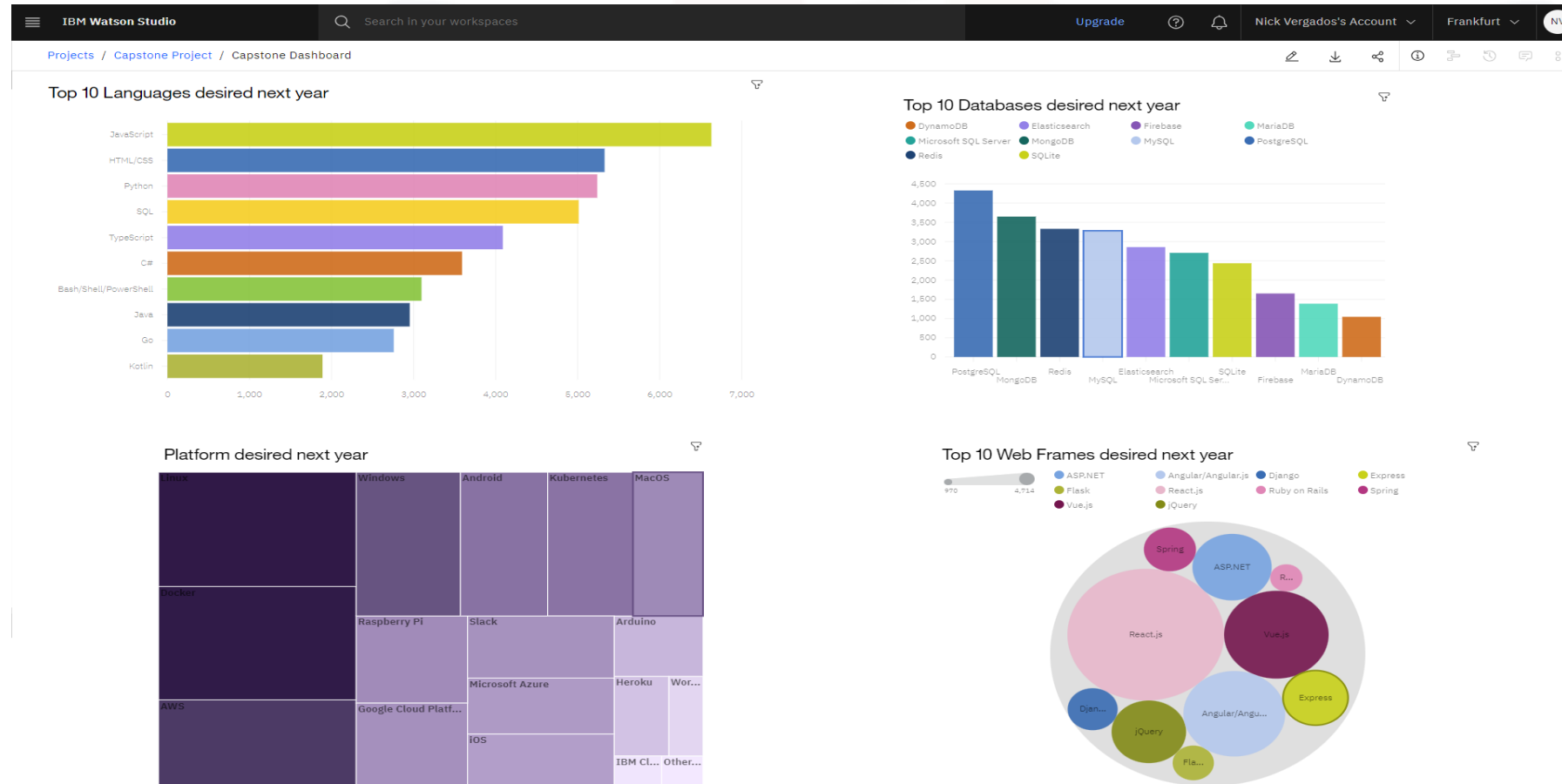
IBM Developer

SKILLS NETWORK

DASHBOARD

https://eu-de.dataplatform.cloud.ibm.com/dashboards/5c9608d8-b3eb-44a3-80ca-3e53d754ae3f/view/5820d02b31eb32ff12e7d0e4079125507a662d59b6bb820bd6827b4909337197a96e1092c82b1e0b8e150062a0ba170fcd
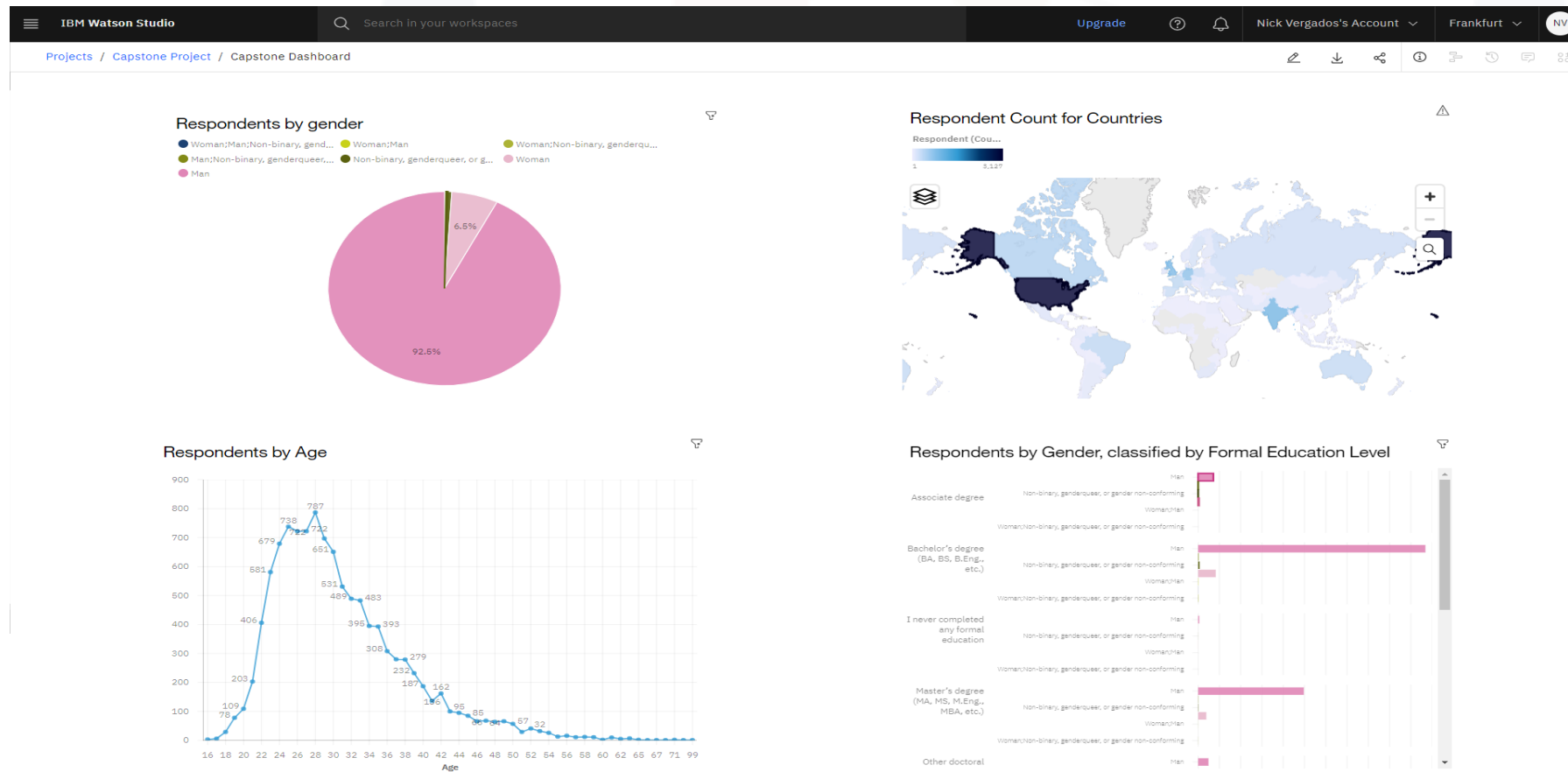
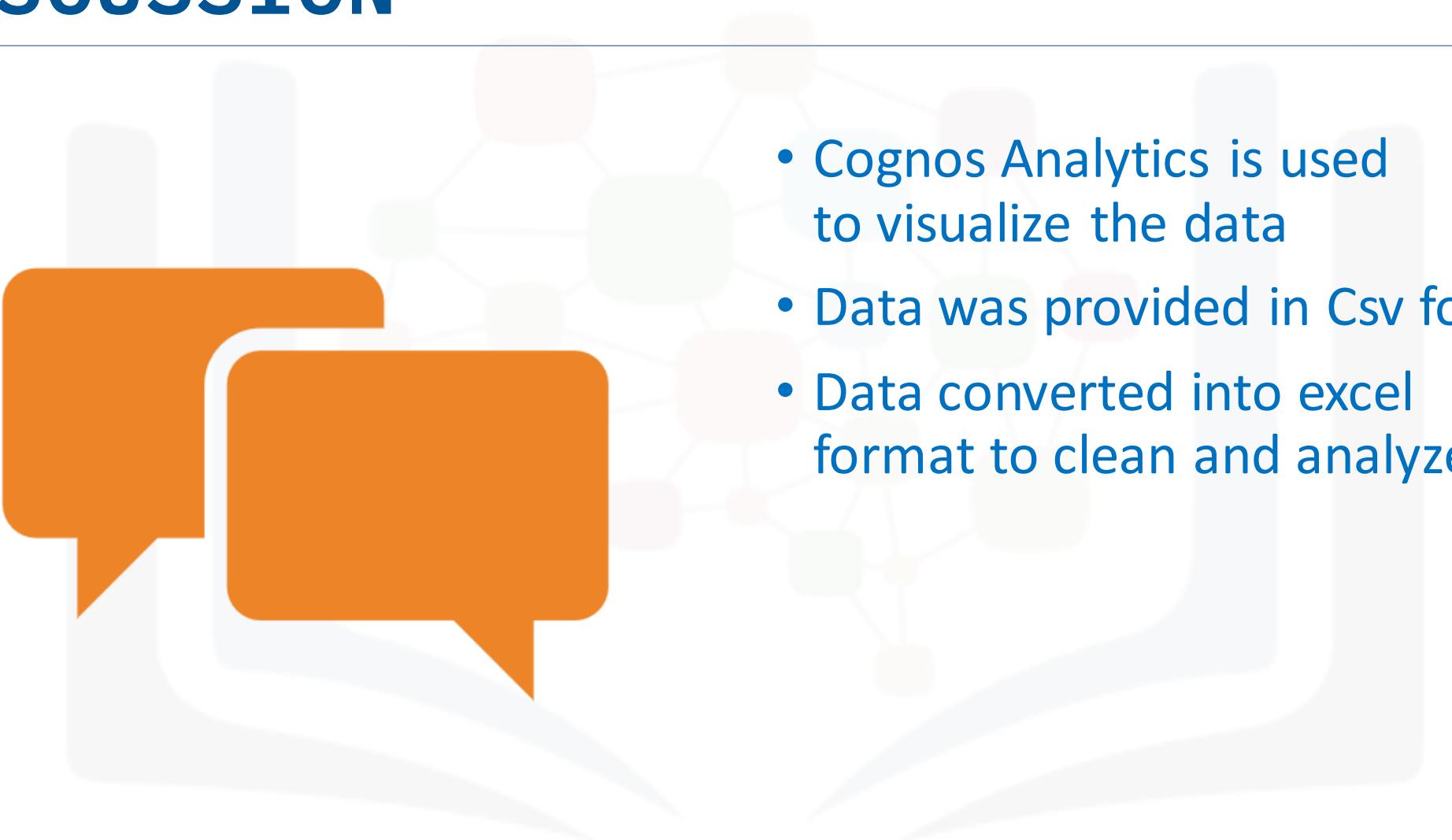# DASHBOARD Current Technology Usage

DASHBOARD Future Technology Trend

DASHBOARD Demographics

DISCUSSION

- Cognos Analytics is used to visualize the data

- Data was provided in Csv format

- Data converted into excel format to clean and analyze data

OVERALL FINDINGS & IMPLICATIONS

Findings

- The overwhelming majority of respondents were MEN

- Most were from the United States

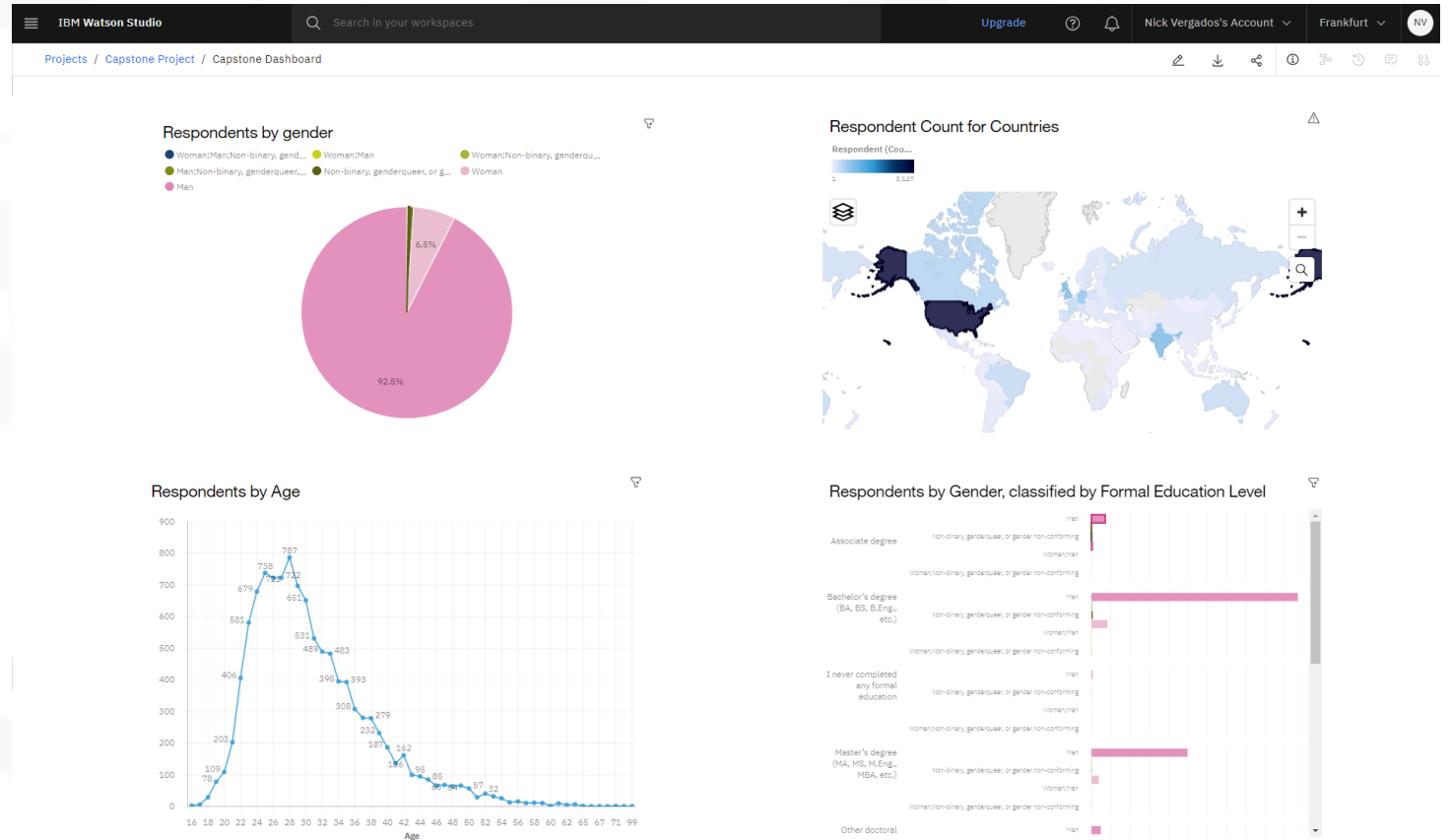- Most were between the ages of 22-35

Implications

- Young men from the United States will continue to dominate the technology sector

IBM Developer
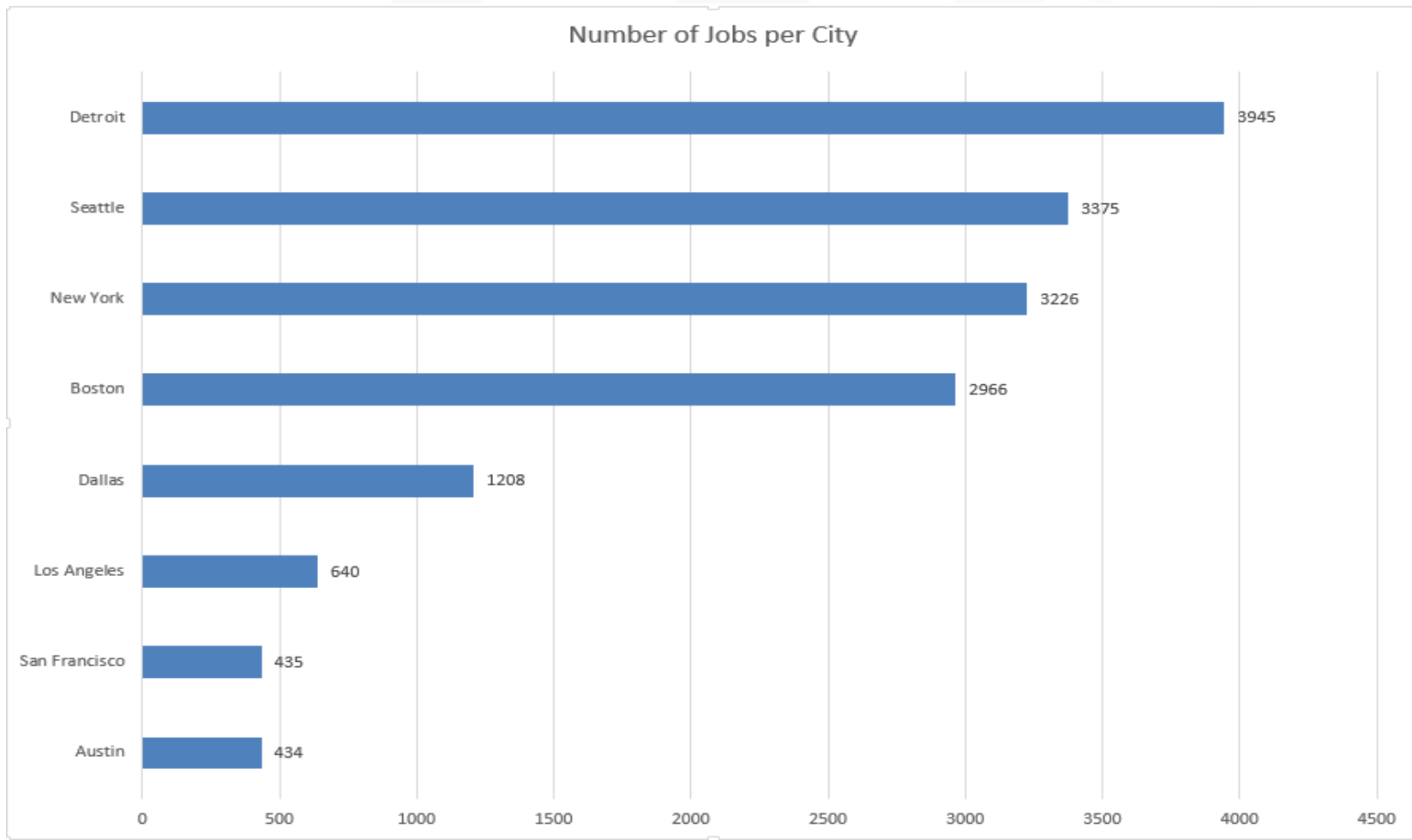
SKILLS NETWORK

CONCLUSION

- JavaScript still is the most popular language, and will be next year

- PostgreSQL will be the most popular database next year

- Linux will be the most desired platform next year

- The majority of the Technology workforce will be young American men aged 22-35

IBM Developer

SKILLS NETWORK

APPENDIX

JOB POSTINGS

Number of Jobs per City

City	Number of Jobs
Detroit	3945
Seattle	3375
New York	3226
Boston	2966
Dallas	1208
Los Angeles	640
San Francisco	435
Austin	434

POPULAR LANGUAGES

Average Annual Salary

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

IBM Developer

SKILLS NETWORK