# Survey Data technologies & demographice

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- Methodology
- Results
  - Visualization – Charts
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OUTLINE

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# EXECUTIVE SUMMARY

**In this Presentation I will continue working with the Stack Overflow Developer Survey 2019 data**

**A Current Technology Usage tab containing:**

- **Top 10 Languages**
- **Top 10 Databases**
- **Platforms**
- **Top 10 WebFrames**

**A Future Technology Trends tab containing:**

- **Top 10 Languages desired for the next year**
- **Top 10 Databases desired for the next year**
- **Desired platforms for the next year**
- **Top 10 WebFrames desired for the next year**

**A Demographics tab containing:**

- **Respondent classified by gender**
- **Respondent count for countries**
- **Respondent count by age**
- **Respondent count by gender and classified by education level**



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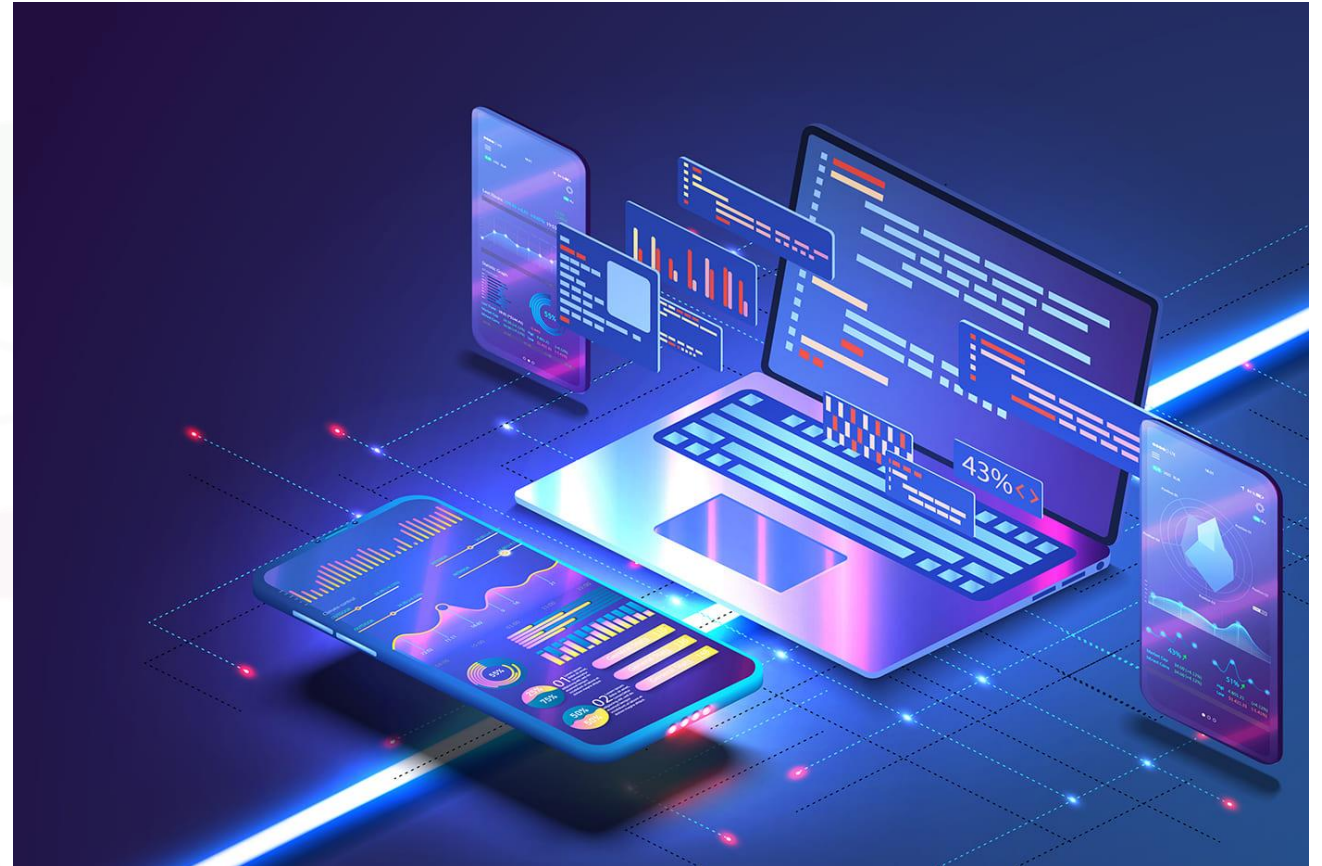
# INTRODUCTION

- ## A Current Technology Usage tab containing:

- **JavaScript** (**17.5** %), **HTML/CSS** (**15.8** %), and **SQL** (**14.3** %) are the most frequently occurring categories of **LanguageWorkedWith** with a combined count of **23,623** items with **Respondent** values (**47.5** % of the total).

- **MySQL** is the most frequently occurring category of **DatabaseWorkedWith** with a count of **5,469** items with **Respondent** values (**18.7** % of the total).

- **PlatformWorkedWith Linux Respondent from LanguageWorkedWith HTML/CSS is 985, whereas Windows is only 745.**

- **WebFrameWorkedWith Angular/Angular.js has the highest Respondent due to LanguageWorkedWith Bash/Shell/PowerShell.**

- ## A Future Technology Trends tab containing:

- **LanguageDesireNextYear SQL has the highest Respondent due to LanguageWorkedWith**

- **DatabaseDesireNextYear Elasticsearch has the highest Respondent due to LanguageWorkedWith Bash/Shell/PowerShell.**

- **PlatformDesireNextYear Slack has the highest average Respondent due to LanguageWorkedWith Dart.**

- **React.js is the most frequently occurring category of WebFrameDesireNextYear with a count of 4,714 items with Respondent values (20.7 % of the total).**

# INTRODUCTION

## A Demographics tab containing:

- **Man** exceeds **Woman** in **Respondent** by **9,749**.

- Country United Republic of Tanzania has the highest **Average Age** but is ranked #107 in Count Respondent.

- Country United States has the highest **Count Respondent** but is ranked #16 in Average Age.

- Age (Group) 25 to < 33 has the highest Respondent at **nearly 5500**, followed by 33 to < 41 at **over 2500**.

- EdLevel Bachelor's degree (BA, BS, B.Eng., etc.) has the highest **Respondent** at **nearly 6 thousand**, out of which Gender Man contributed the most at **nearly 5500**.

- Gender Man has the highest **Respondent** due to EdLevel Bachelor's degree (BA, BS, B.Eng., etc.).

# METHODOLOGY

Stack Overflow, a popular website for developers, conducted an online survey of software professionals across the world. The survey data was later open sourced by Stack Overflow. The actual data set has around 90,000 responses comes from the following source: https://stackoverflow.blog/2019/04/09/the-2019-stack-overflow-developer-survey-results-are-in/ under a **ODbL: Open Database License**.

# METHODOLOGY

**Data Collection**

- Collecting Data Using APIs
- Collecting Data Using Webscraping
- Exploring Data

**Data Wrangling**

- Finding Missing Values
- Determine Missing Values
- Finding Duplicates
- Removing Duplicates
- Normalizing Data

**Exploratory Data Analysis**

- Distribution
- Outliers
- Correlation

**Data Visualization**

- Visualizing Distribution of Data
- Relationship
- Composition
- Comparison

# METHODOLOGY

**Dashboard Creation**

- Dashboards

As for the last step, it was done by:

IBM Cognos Analytics

# RESULTS

**Man** exceeds **Woman** in **Respondent** by **9,749**.

LanguageDesireNextYear SQL has the highest Respondent due to LanguageWorkedWith

DatabaseDesireNextYear Elasticsearch has the highest Respondent due to LanguageWorkedWith Bash/Shell/PowerShell.

JavaScript (17.5 %), HTML/CSS (15.8 %), and SQL (14.3 %) are the most frequently occurring categories of LanguageWorkedWith with a combined count of 23,623 items with Respondent values (47.5 % of the total).

The United States is one of the most developed countries in this field

Age (Group) 25 to < 33 has the highest Respondent at nearly 5500, followed by 33 to < 41 at over 2500.

Gender Man has the highest Respondent due to EdLevel Bachelor's degree (BA, BS, B.Eng., etc.).

# PROGRAMMING LANGUAGE TRENDS

Current Year
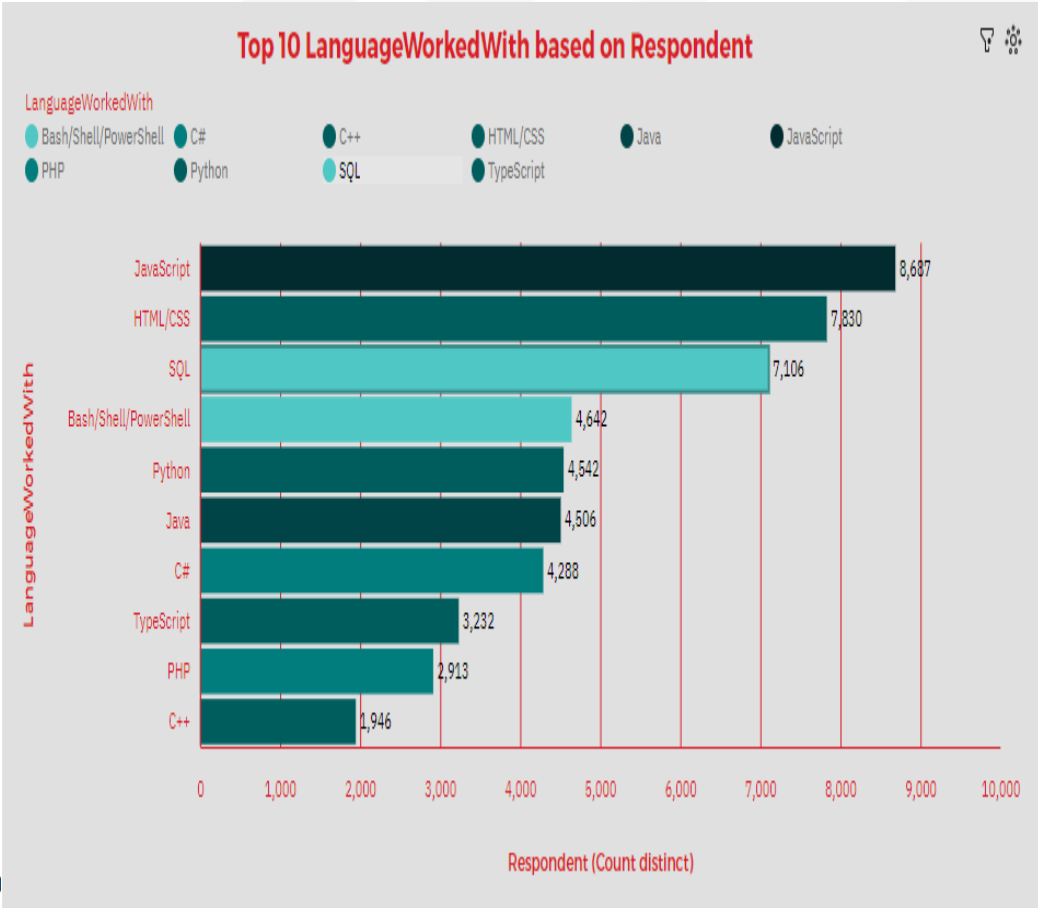
Next Year
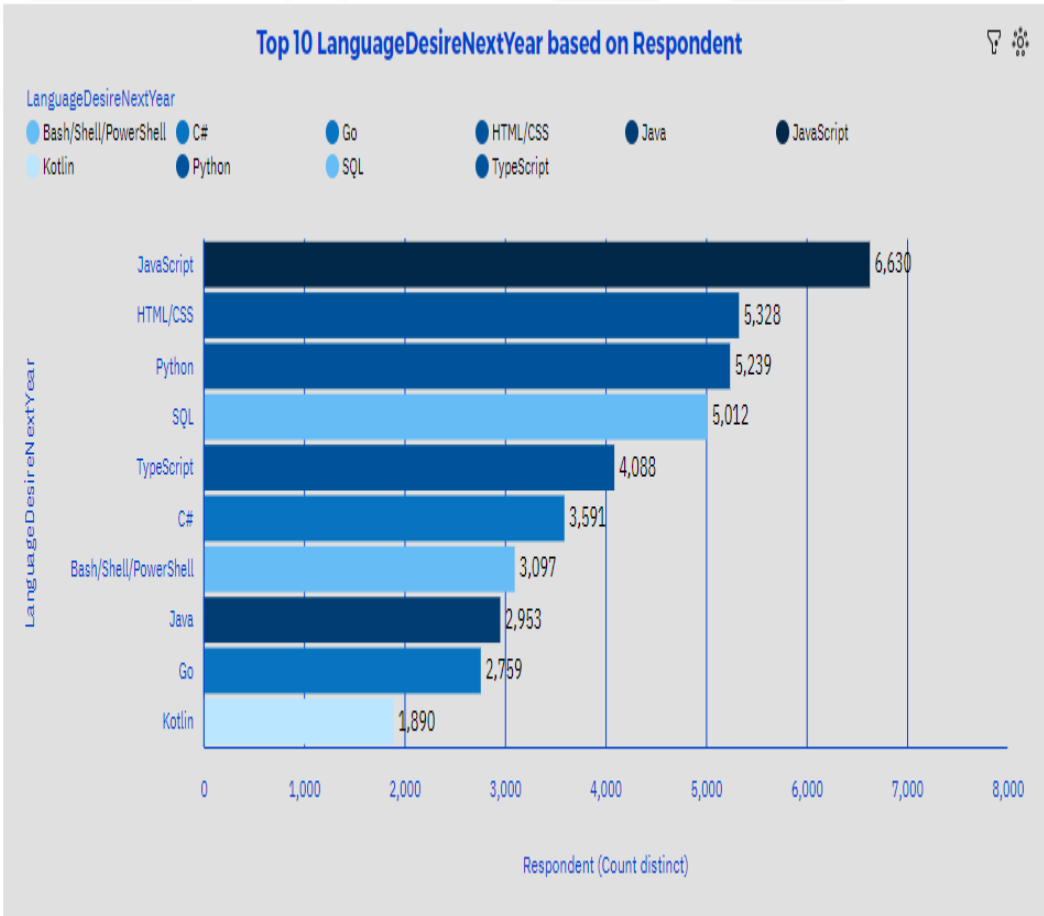
# PROGRAMMING LANGUAGE TRENDS - FINDINGS & IMPLICATIONS

JavaScript (**17.5** %), HTML/CSS (**15.8** %), and **SQL** (**14.3** %) are the most frequently occurring categories of **LanguageWorkedWith** with a combined count of **23,623** items with **Respondent** values (**47.5** % of the total).
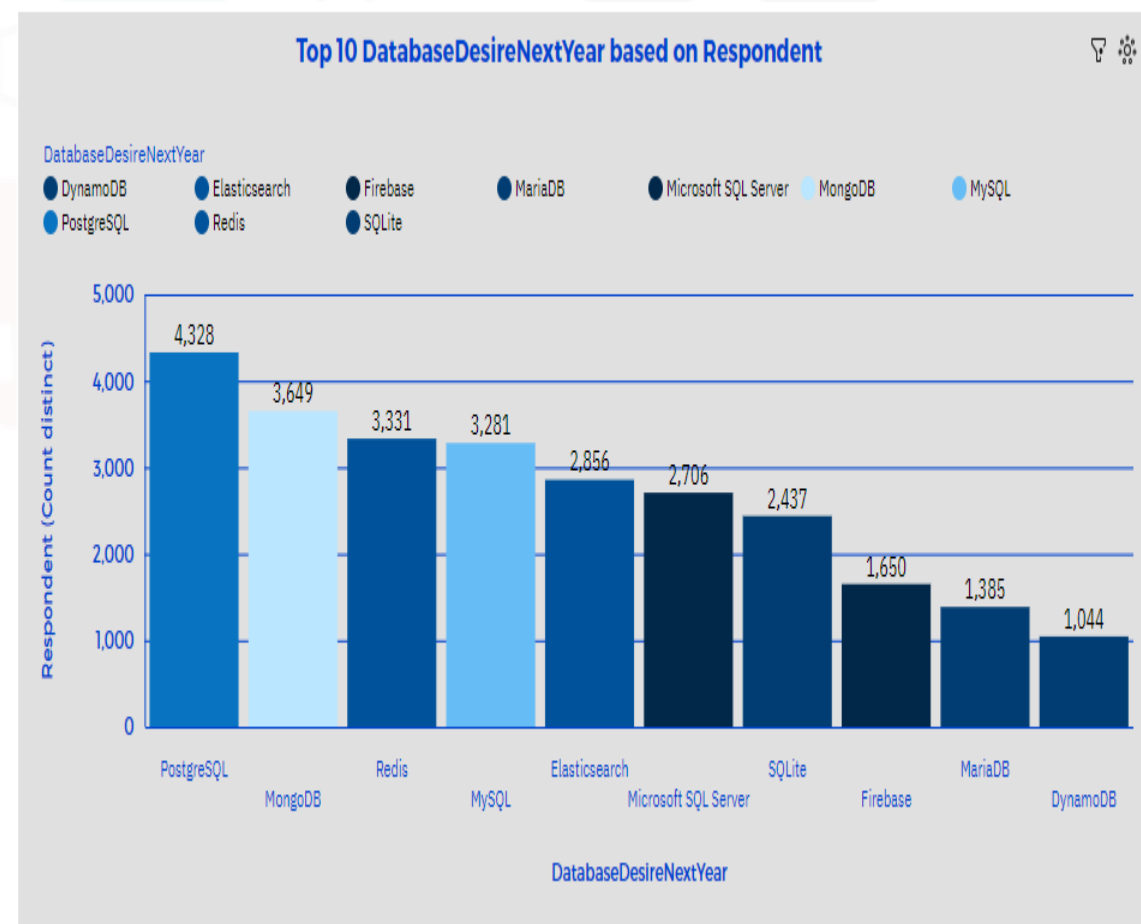
LanguageDesireNextYear SQL has the highest Respondent due to LanguageWorkedWith

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# DATABASE TRENDS

Current Year
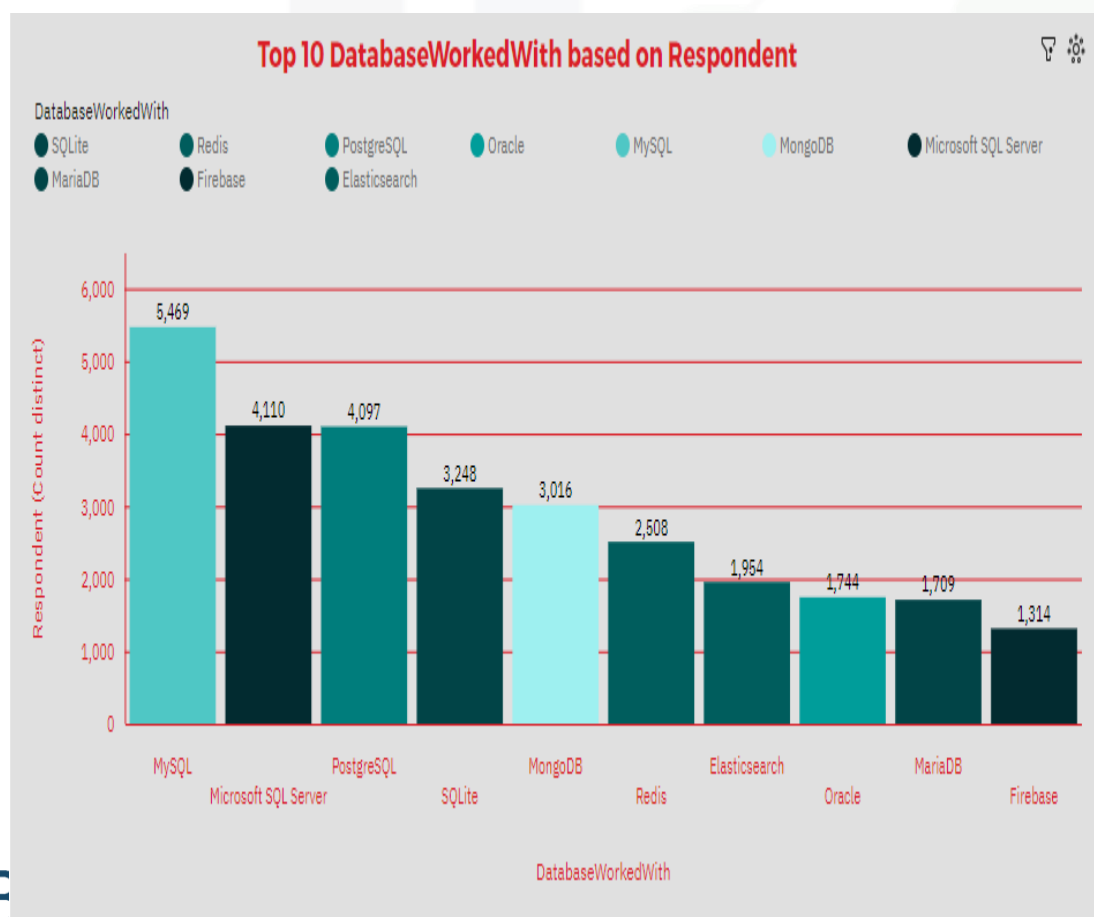
Next Year

# DATABASE TRENDS - FINDINGS & IMPLICATIONS

MySQL is the most frequently occurring category of **DatabaseWorkedWith** with a count of **5,469** items with **Respondent** values (**18.7** % of the total).

DatabaseDesireNextYear Elasticsearch has the highest Respondent due to LanguageWorkedWith Bash/Shell/PowerShell.

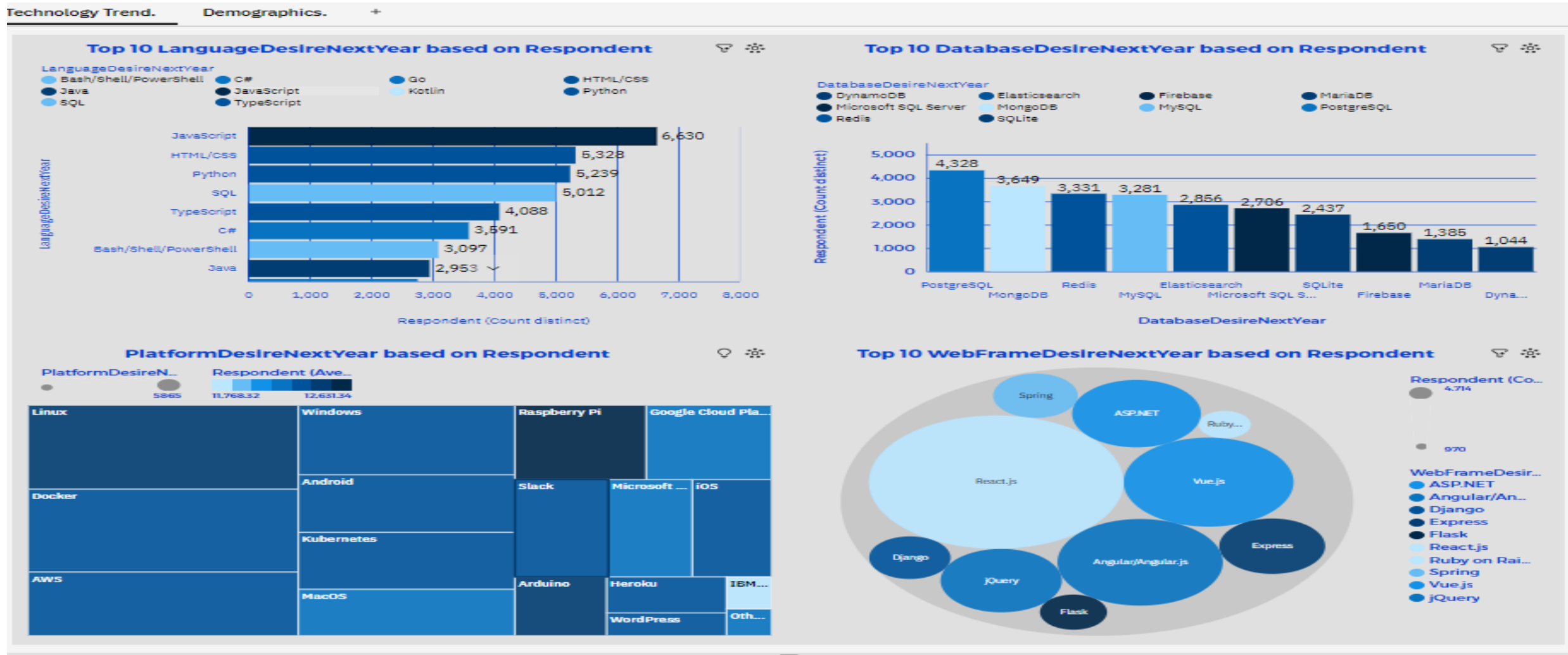**IBM Developer**

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# DASHBOARD

Link for dashbords

https://us1.ca.analytics.ibm.com/bi/?perspective=dashboard&pathRef=.my_folders%2Fm5_survey_data_technologies_%2Bdashboards&action=view&mode=dashboard&subView=model0000018f05295966_00000000
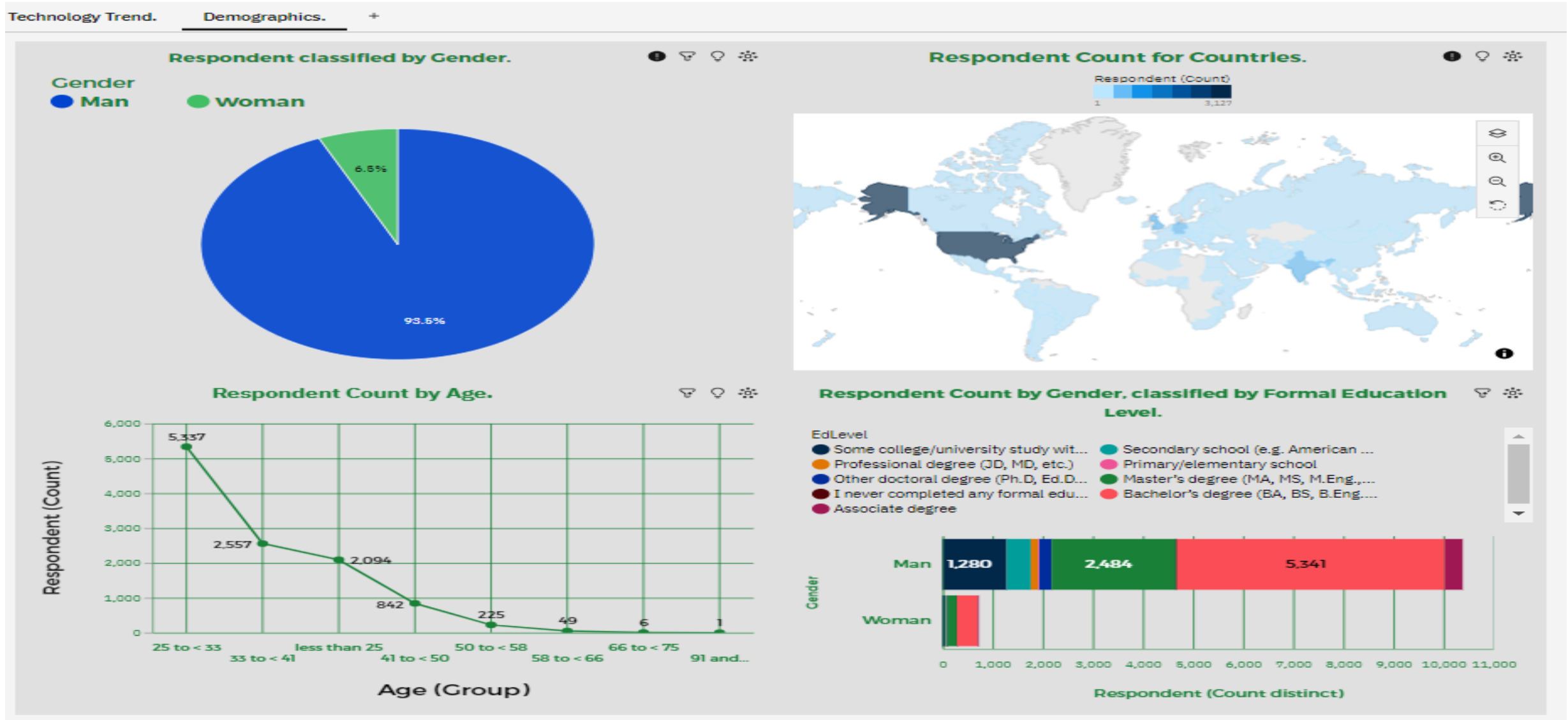
# DASHBOARD A Current Technology Usage
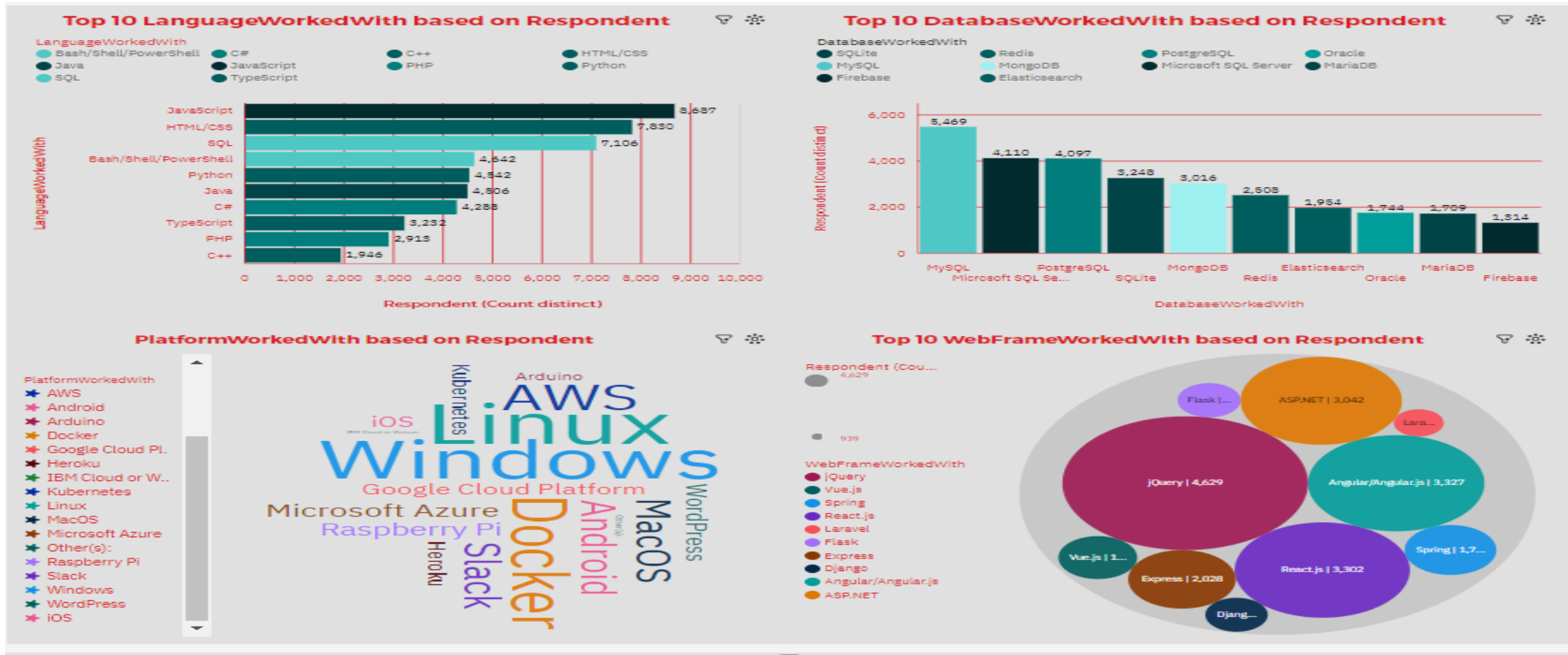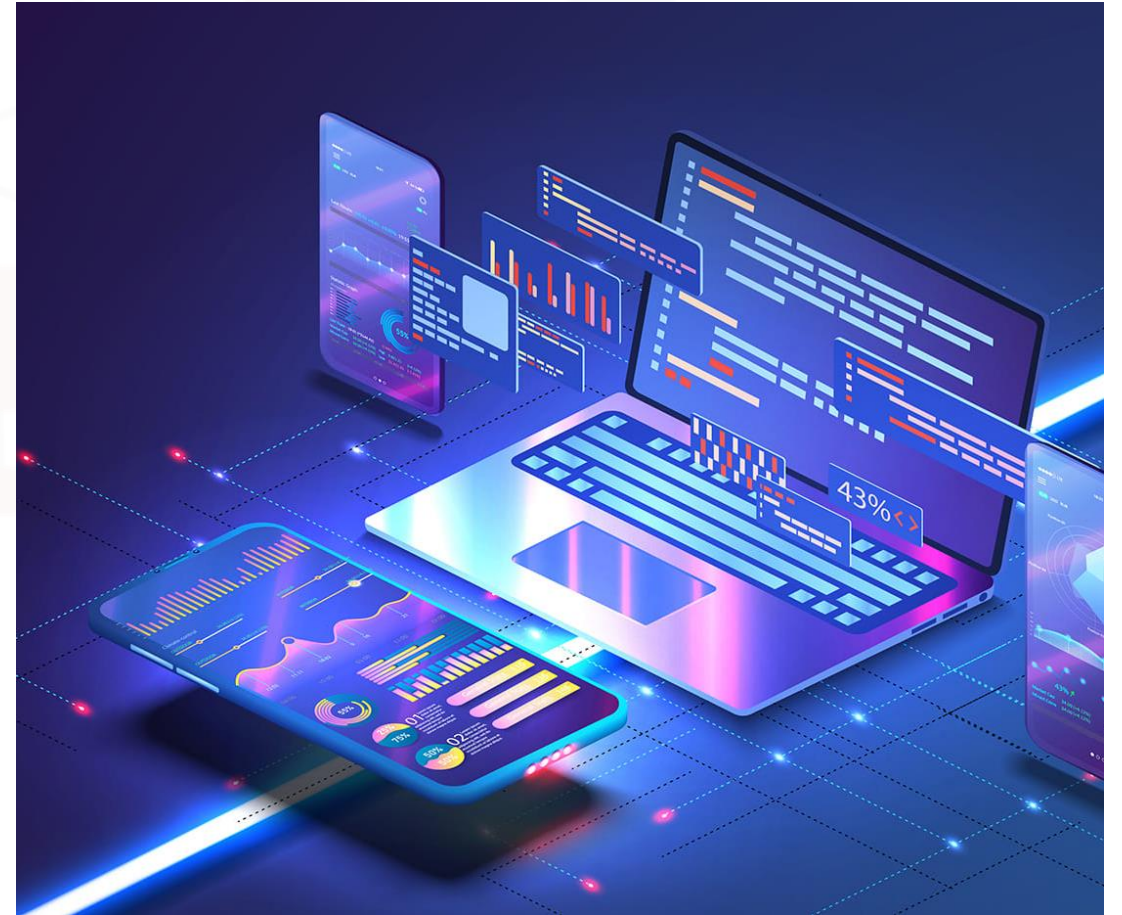
# DASHBOARD A Future Technology Trends
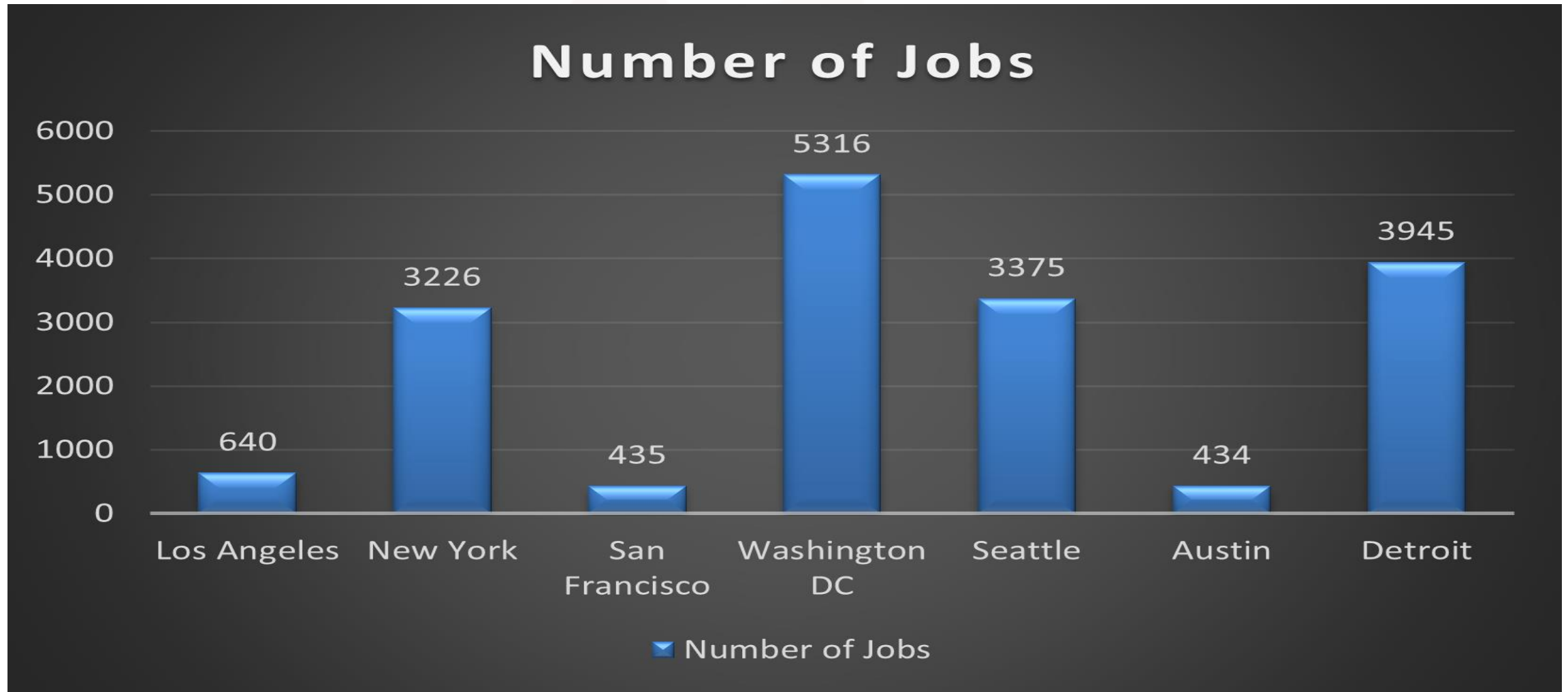
# DASHBOARD A Demographics

# OVERALL FINDINGS & IMPLICATIONS

The technical field around the world has become one of the most important fields, and the growth and expansion in it is clearly accelerating around the world, and I noticed that the numbers of women in it are not encouraging.

# JOB POSTINGS



**Number of Jobs**

| City | Number of Jobs |
|------|----------------|
| Los Angeles | 640 |
| New York | 3226 |
| San Francisco | 435 |
| Washington DC | 5316 |
| Seattle | 3375 |
| Austin | 434 |
| Detroit | 3945 |

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# POPULAR LANGUAGES



Number of Job postings