Data Analysis of Technology Trends

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OUTLINE

- Executive Summary

- Introduction

- Methodology

- Results
  - Visualization – Charts
  - Dashboard

- Discussion
  - Findings & Implications

- Conclusion

- Appendix

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SKILLS NETWORK

EXECUTIVE SUMMARY

- Trends on emerging skills

- Top programming skills
  - Job postings
  - Training portals
  - Surveys

- Popular database skills and IDEs

- Age and Gender gaps in jobs

INTRODUCTION

- To Analyze trends on emerging skills this year

- What are the top programming languages in demand?

- What are the top database skills in demand?

- What are the popular IDEs?

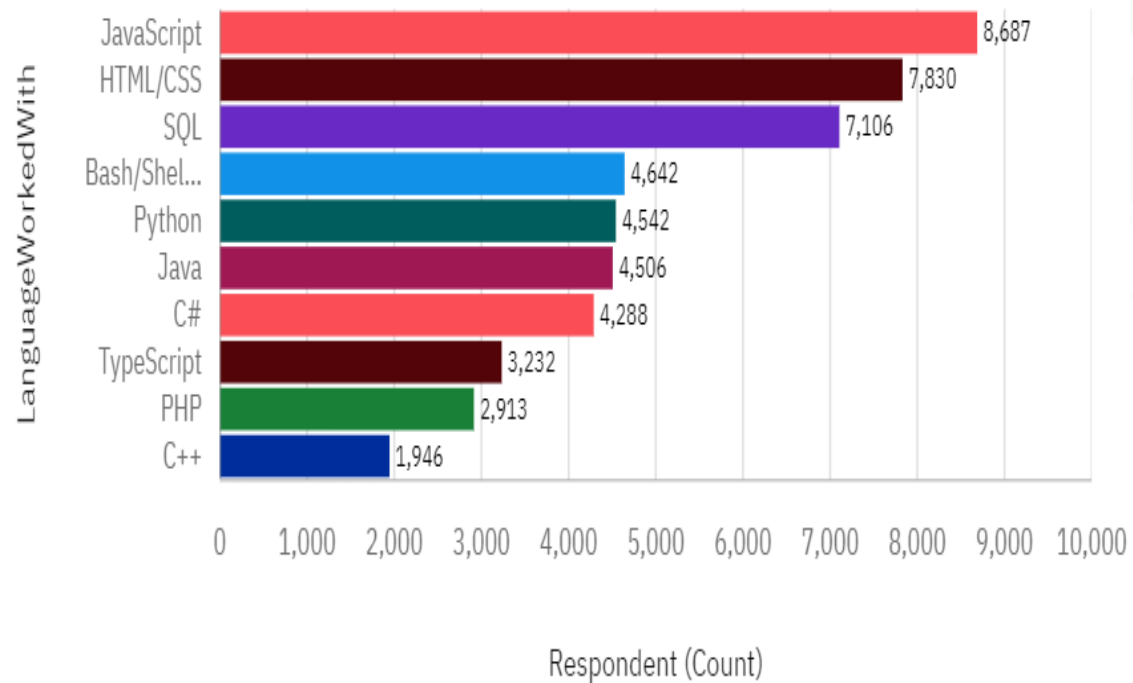- Popular skills by Countries and Gender

METHODOLOGY

- Data Collection

- Data Analysis

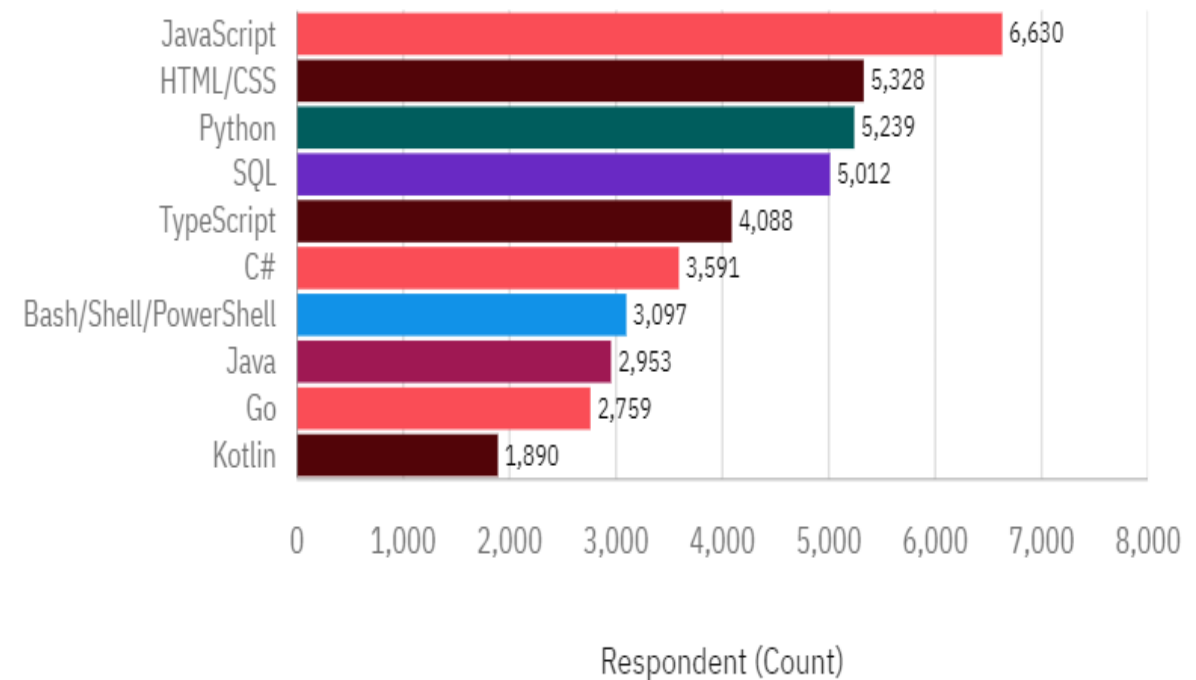- Data Cleaning

- Data Visualization

- Findings and Implications

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PROGRAMMING LANGUAGE TRENDS

Current Year

Next Year

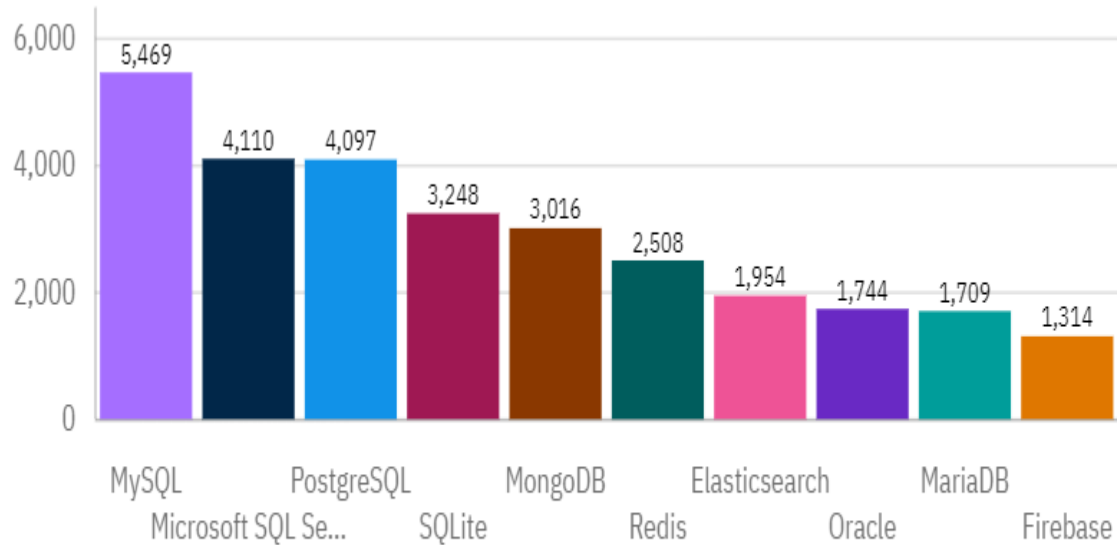# PROGRAMMING LANGUAGE TRENDS - FINDINGS & IMPLICATIONS

Findings

- Top 2 Languages this year is JavaScript and HTML/CSS

- Top 2 Languages next year is Bash/shell/PowerShell and C#

- C++ and PHP are out of top 10 next year

Implications

- Python and Typescript demand has raised

- Go and Kotlin demand is slowly raising
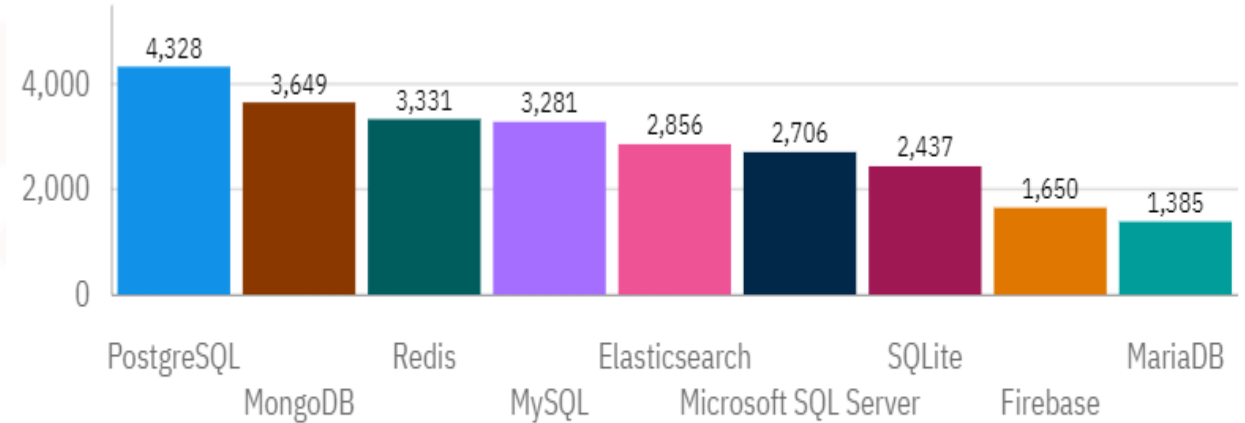
- PHP is out of top list

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DATABASE TRENDS

Current Year

MySQL	5,469
Microsoft SQL Se...	4,110
PostgreSQL	4,097
SQLite	3,248
MongoDB	3,016
Redis	2,508
Elasticsearch	1,954
Oracle	1,744
MariaDB	1,709
Firebase	1,314

DatabaseWorkedWith

Next Year

PostgreSQL	4,328
MongoDB	3,649
Redis	3,331
MySQL	3,281
Elasticsearch	2,856
Microsoft SQL Server	2,706
SQLite	2,437
Firebase	1,650
MariaDB	1,385

DatabaseDesireNextYear

DATABASE TRENDS - FINDINGS & IMPLICATIONS

Findings

- MySQL and Microsoft SQL server are top this year

- PostgreSQL and MongoDB are top next year

- Oracle and PostgreSQL are out of top 10 next year

Implications

- Firebase and MariaDB are still in demand

- Redis is in high demand
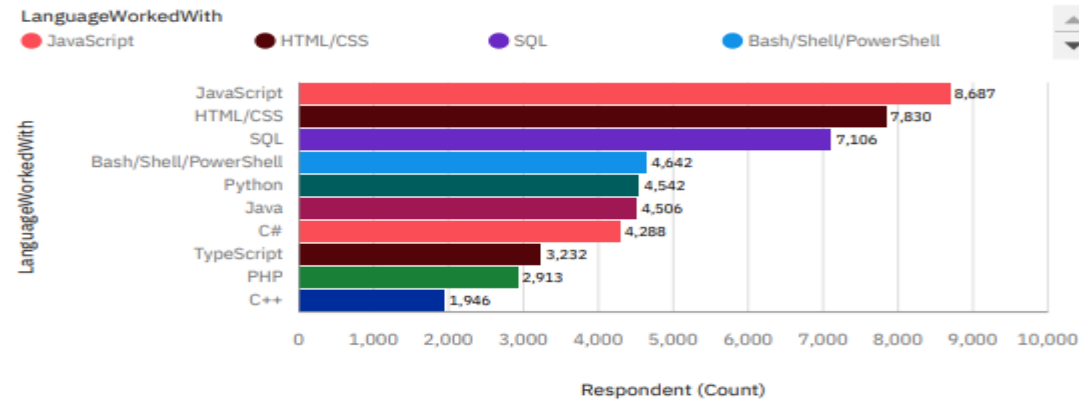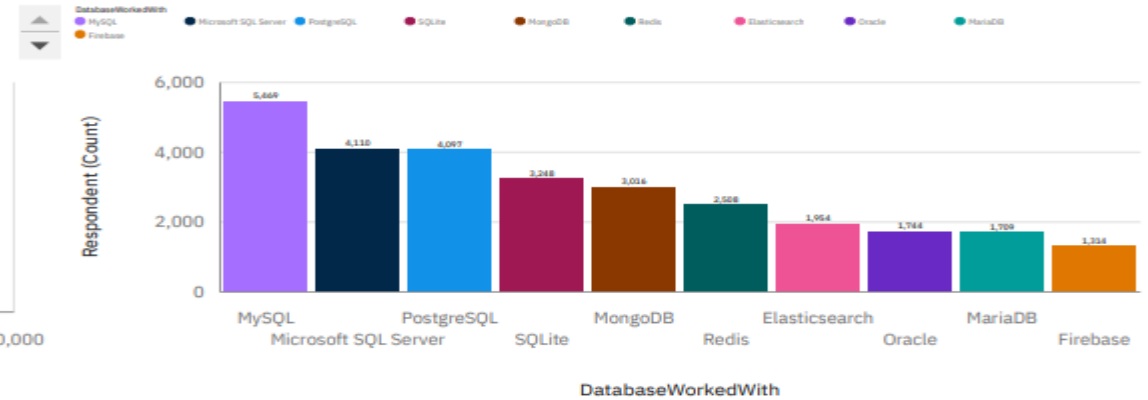
- Elastic search demand is slowly increasing

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DASHBOARD

Dashboard Link is here

DASHBOARD TAB 1
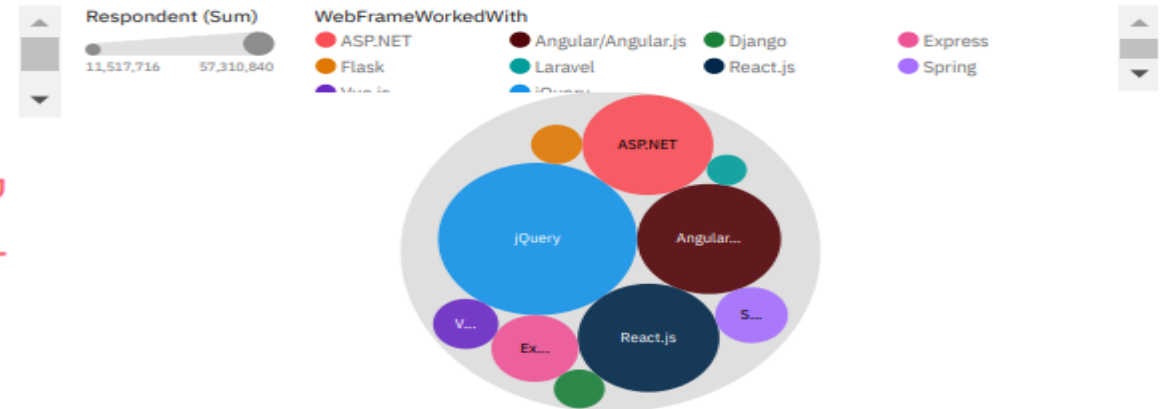
DASHBOARD TAB 2

Future Technology Trend

Bar Chart for LanguageDesire

LanguageDesireNextYear

- JavaScript
- HTML/CSS
- Python
- SQL

Language	Count
JavaScript	6,630
HTML/CSS	5,328
Python	5,239
SQL	5,012
TypeScript	4,088
C#	3,591
Bash/Shell/PowerShell	3,097
Java	2,953
Go	2,759
Kotlin	1,890

Respondent (Count): 0, 1,000, 2,000, 3,000, 4,000, 5,000, 6,000, 7,000, 8,000

LanguageDesireNextYear
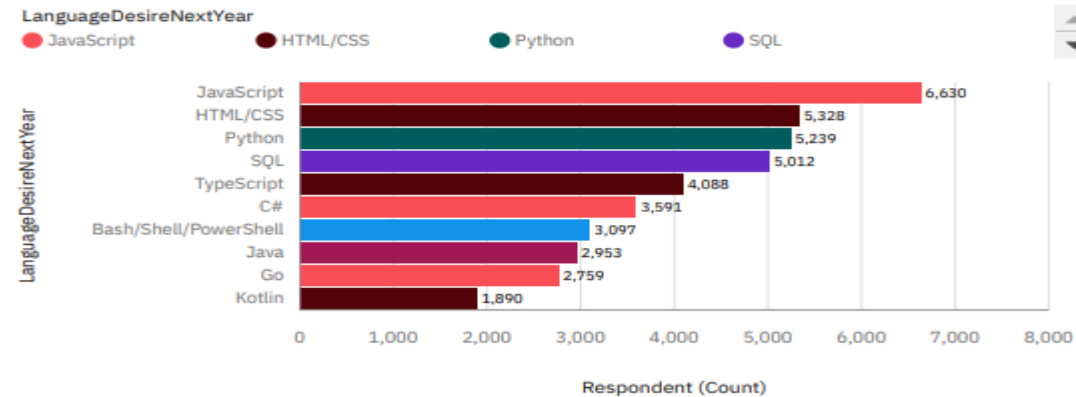
Column Chart for DatabaseDesire

DatabaseDesireNextYear

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

Database	Count
PostgreSQL	4,328
MongoDB	3,649
Redis	3,331
MySQL	3,281
Elasticsearch	2,856
Microsoft SQL Server	2,706
SQLite	2,437
Firebase	1,650
MariaDB	1,385
Dynam...	1,044

Respondent (Count): 0, 2,000, 4,000

DatabaseDesireNextYear
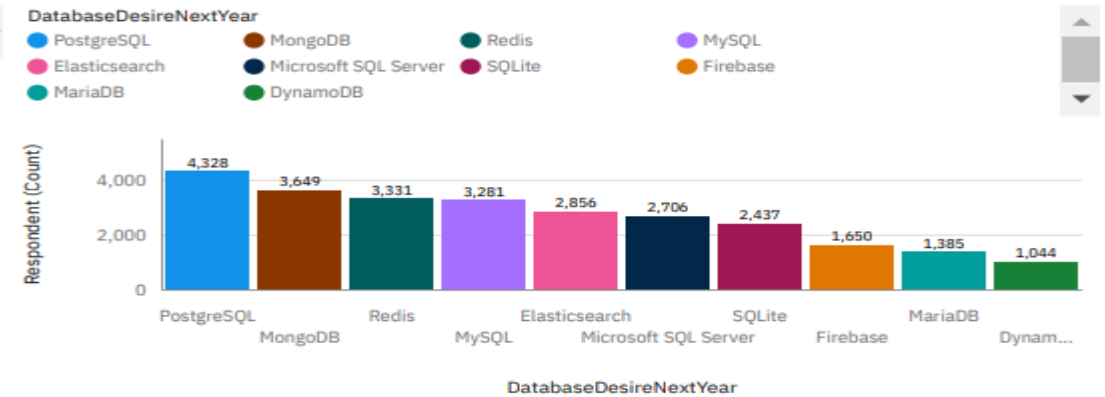
Tree Map Chart for Platform Desire

Respondent (Sum): 3,752,980 — 73,486,491

PlatformDesireNe...: 307 — 5,865

Linux, Docker, AWS, Windows, Android, Kubernetes, MacOS, Raspberry Pi, Google Cl..., Slack, iOS, Arduino, Heroku, Wo..., Microsof..., IBM ..., Oth...
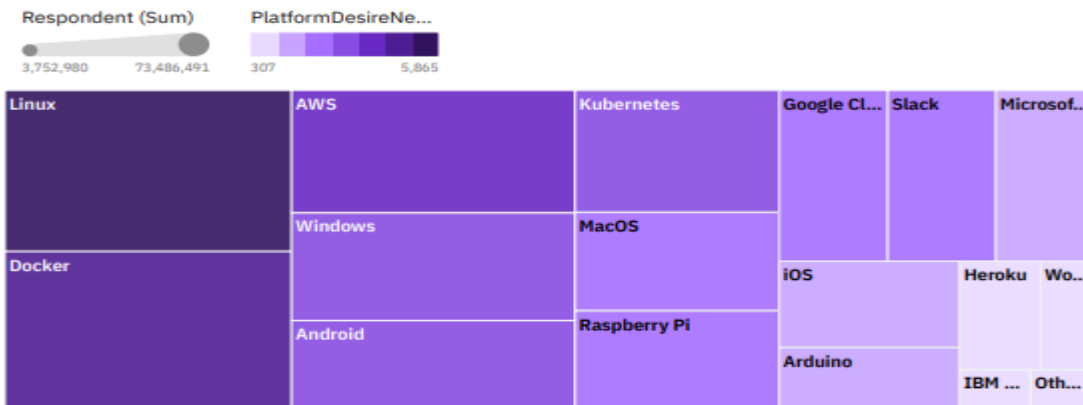
Hierarchy Bubble Chart for WebFrame Desire

Respondent (Sum): 11,886,651 — 58,321,909

WebFrameDesireNextYear

- ASP.NET
- Angular/Angular.js
- Django
- Express
- Flask
- React.js
- Ruby on Rails
- Spring
- Vue.js
- jQuery

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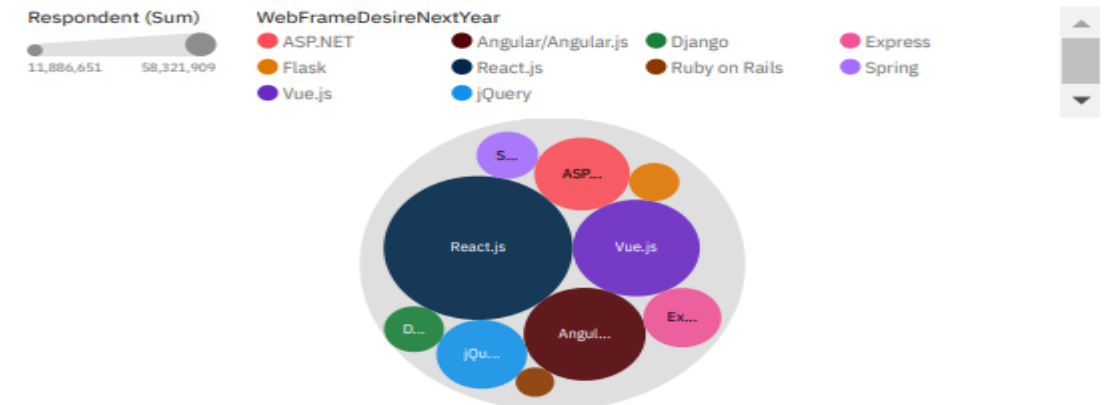
DASHBOARD TAB 3

Demographics

Pie Chart by Gender

Gender
- Woman
- Man

6.....

93.5%
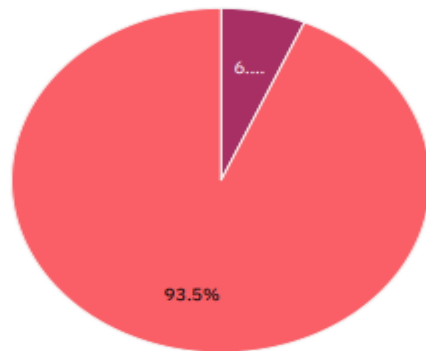
Map Chart by Country

Respondent (Cou...
1   3,127

© Mapbox © OpenStreetMap

Line Chart by Age
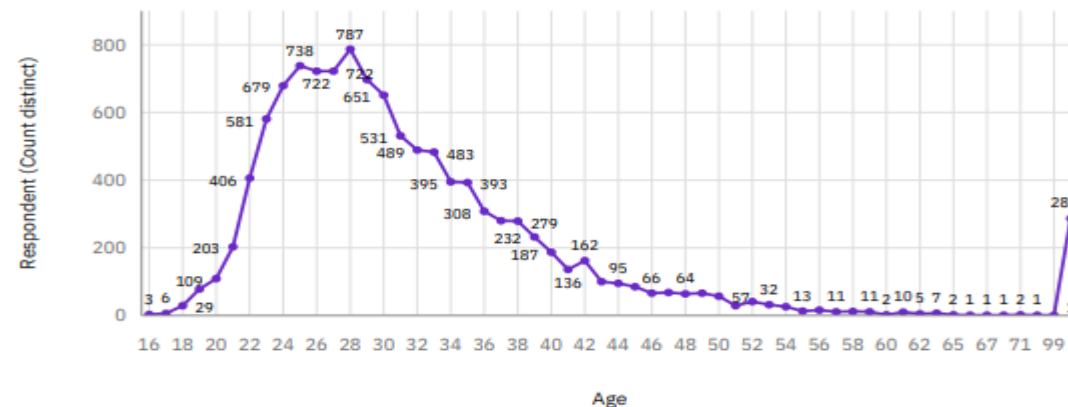
Stacked Bar chart by Edu level and Gender

EdLevel
- (no value)
- I never completed any formal edu...
- Primary/elementary school
- Associate degree
- Master's degree (MA, MS, M.Eng., ...
- Professional degree (JD, MD, etc.)
- Bachelor's degree (BA, BS, B.Eng.,...
- Other doctoral degree (Ph.D, Ed.D...
- Secondary school (e.g. American ...

Man: 357 5,341 2,484 482 1,280
Woman

Respondent (Count)

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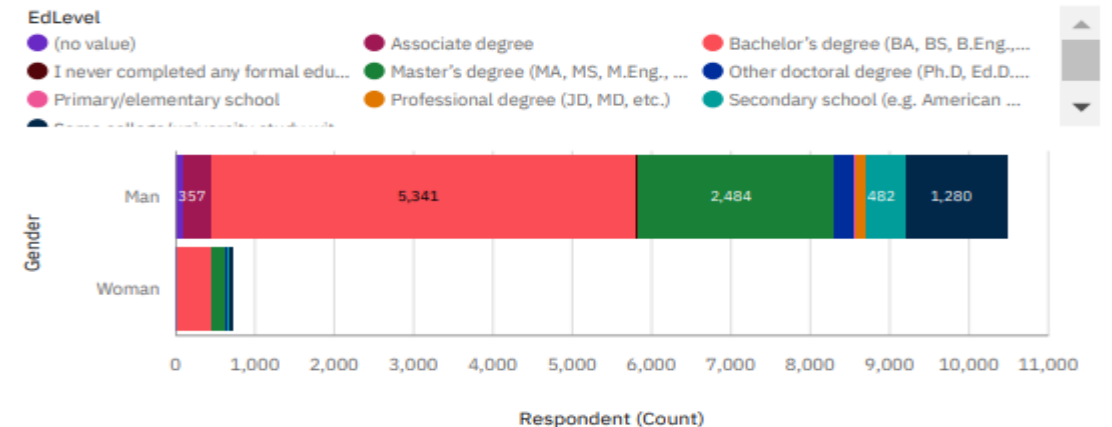
DISCUSSION

OVERALL FINDINGS & IMPLICATIONS

Findings

- There is a big job gap between Man and Woman

- Age 20 to 40 people are highly working in the job

- Technology is vastly changing every year

Implications

- Employee and Employers need to develop more based-on technology changes

- Hiring of woman and man needs to be equal

- Still there are countries lagging in technology changes

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CONCLUSION

- Top emerging skills
- Technology trends for current and next year
- Spread of Technology world-wide
- Future Technology Trends
- Gender Gaps

APPENDIX

- Dataset used:
    - Survey Data Technologies Normalized
    - Survey Data Demographics