



Emerging Technologies

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OUTLINE



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

EXECUTIVE SUMMARY



- Introduction to the problem and goal of this research
- Data methodology
 - gathering
 - analyzing
 - visualizing
- Sharing of insights and results based on graphs and charts
- Discussion about findings and implications
- Conclusion and final recommendation

INTRODUCTION



- This presentation is meant to highlight current most used skills and technologies in the IT sector as well as future projections based on a survey conducted by Stack Overflow
- The analysis is mainly focused on the following inquiries:
 - Which programming languages, databases, platforms and web frames are currently used the most?
 - Which technologies are desired the most for next year?
 - What is the demography of workers in the IT sector?
- This presentation should help IT professionals, HR Managers, Recruiters and anybody who wants to join the IT sector to learn about top on-demand skills and determine their career path

METHODOLOGY



- Data Collection
 - Using APIs
 - Using Web Scraping
- Data Wrangling
 - Removing Duplicates
 - Imputing Missing Data
 - Normalizing Data
- Exploratory Data Analysis
 - Data Distribution
 - Outliers
 - Correlation
- Data Visualization
 - distribution of data, relationships, composition, comparison
- Dashboard

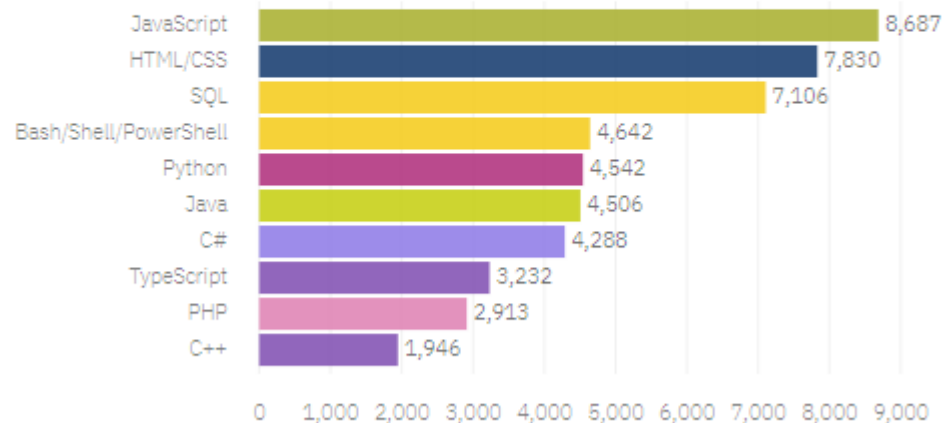
RESULTS



PROGRAMMING LANGUAGE TRENDS

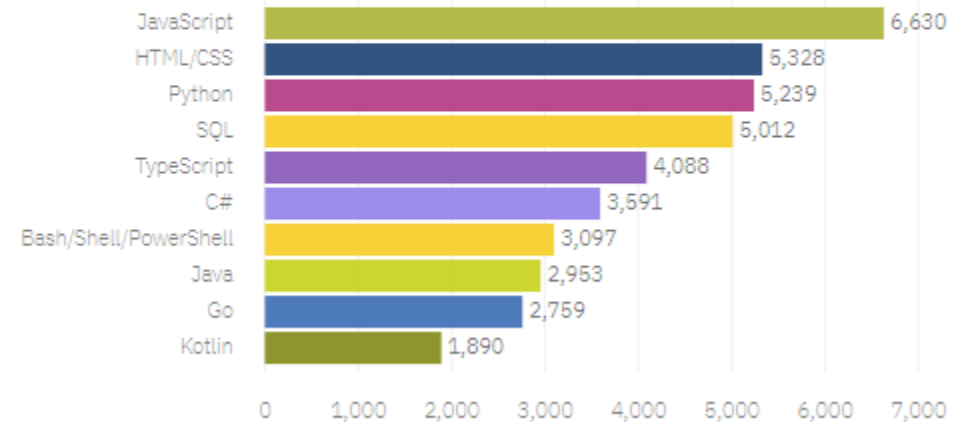
Current Year

Top 10 languages worked with



Next Year

Top 10 languages learn desire for next year



PROGRAMMING LANGUAGE TRENDS - FINDINGS & IMPLICATIONS

Findings

- JavaScript and HTML/CSS continue going strong
- Recent Python trend still pointing upwards
- Old top-dogs like Java and C++ going out of favour

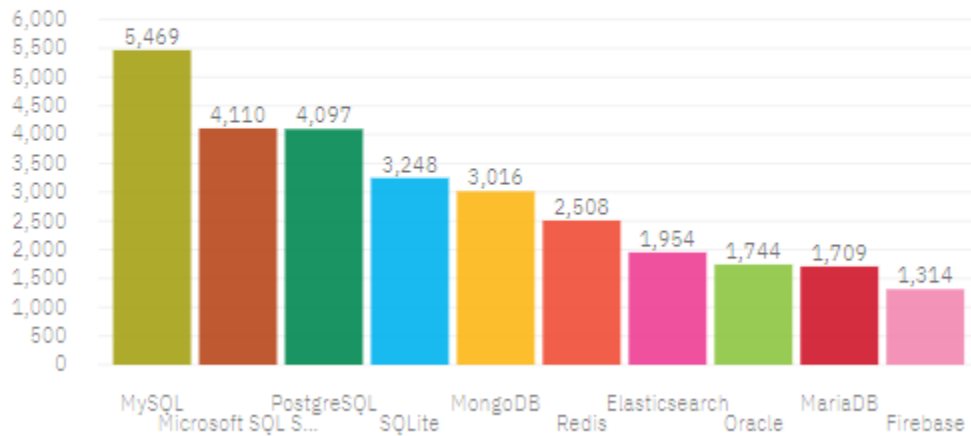
Implications

- With the emergence of Machine Learning and AI, Python knowledge will be more and more desired
- Web development skills still in high demand
- SQL knowledge important with the continuous growth of Big Data

DATABASE TRENDS

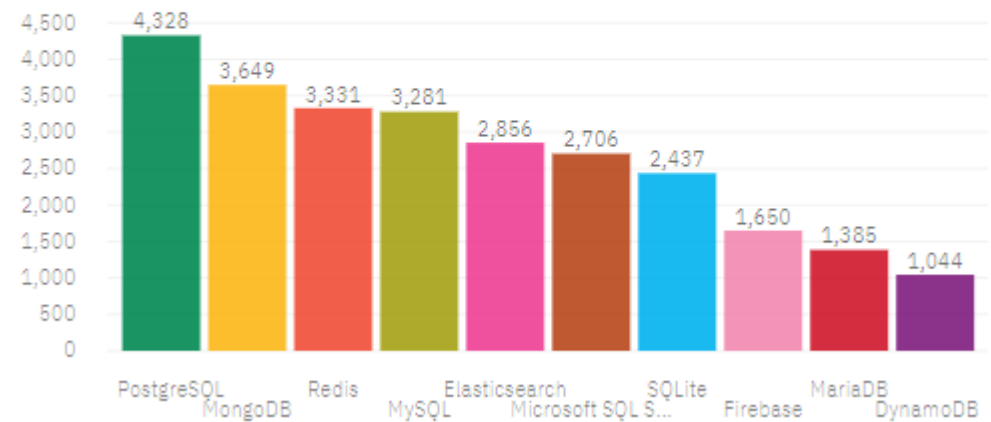
Current Year

Top 10 databases worked with



Next Year

Top 10 databases learn desire for next year



DATABASE TRENDS - FINDINGS & IMPLICATIONS

Findings

- MySQL and Microsoft SQL Server losing on interest
- PostgreSQL and MongoDB emerging as new favourites
- Big increase for Redis and Elasticsearch

Implications

- Open-source solutions still preferred
- NoSQL databases like MongoDB and Redis might be the way forward

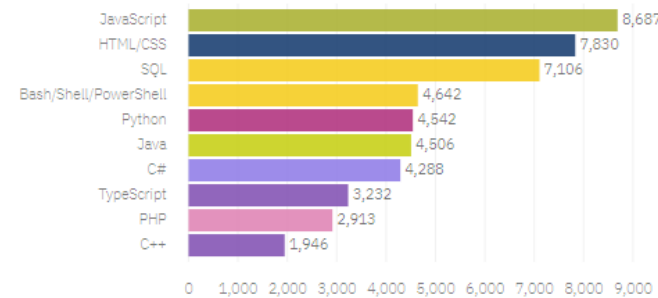
DASHBOARD



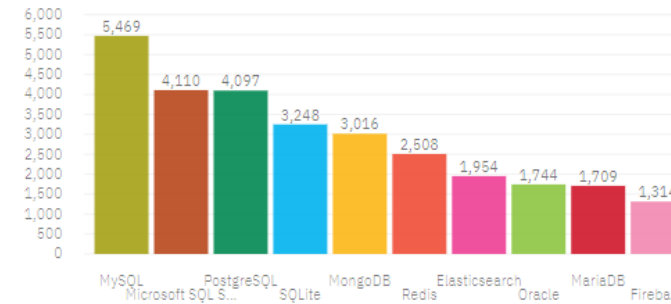
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CURRENT TECHNOLOGY USAGE

Top 10 languages worked with



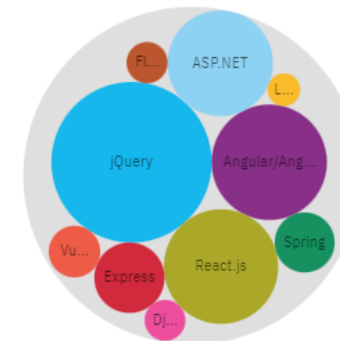
Top 10 databases worked with



Platforms worked with

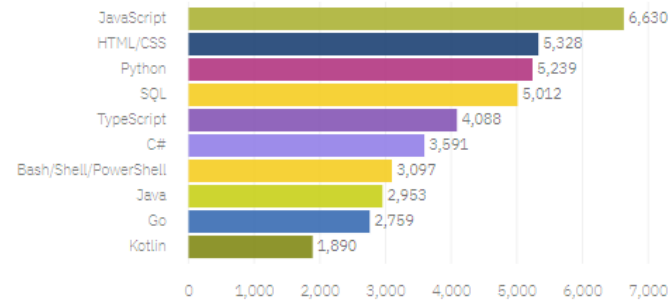


Top 10 web frames worked with

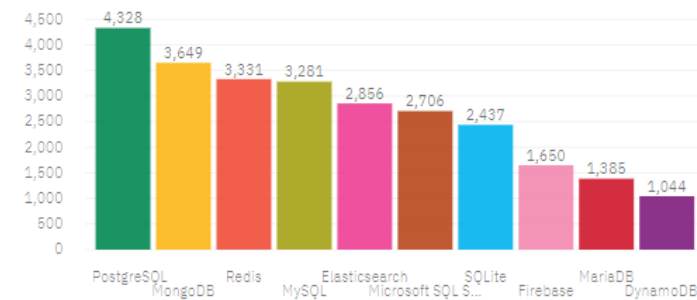


FUTURE TECHNOLOGY TREND

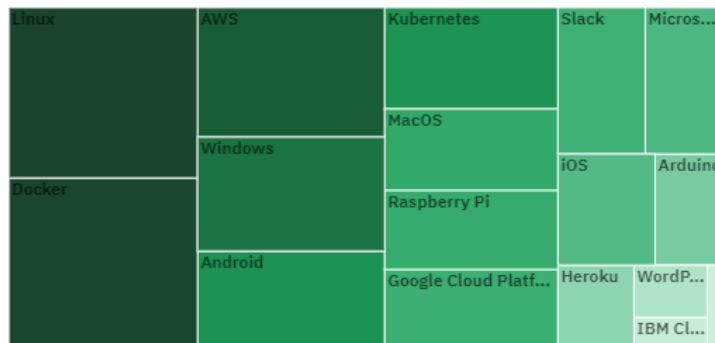
Top 10 languages learn desire for next year



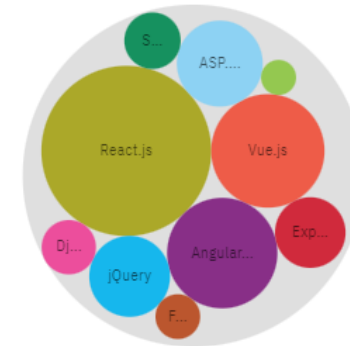
Top 10 databases learn desire for next year



Platform learn desire for next year



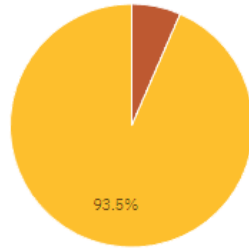
Top 10 web frames learn desire for next year



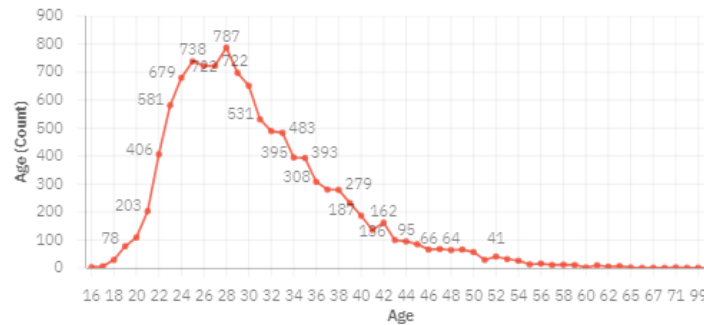
DEMOGRAPHICS

Respondent classified by Gender

Gender
● Woman ● Man

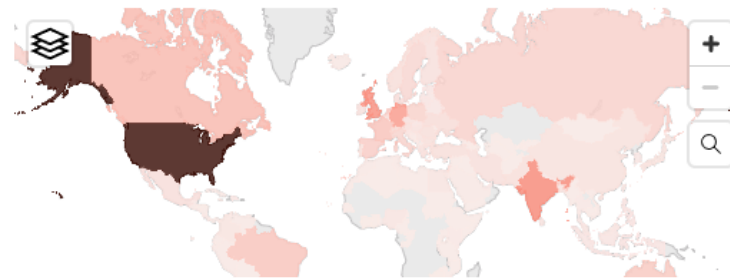


Respondent Count by Age



Respondent Count for Countries

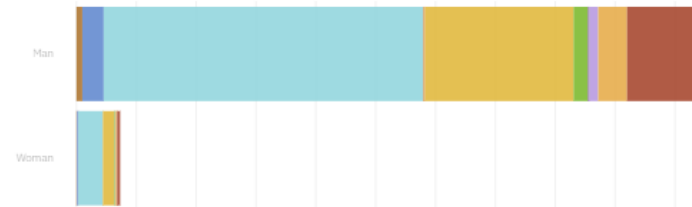
Country (Count)



Respondent Count by Gender, classified by Formal Education Level

EdLevel

● (no value) ● Associate degree
● Bachelor's degree (BA, BS, B.E...) ● I never completed any formal ...
● Master's degree (MA, MS, M.E) ● Other doctoral degree (Ph.D., E...)



DISCUSSION



OVERALL FINDINGS & IMPLICATIONS

Findings

- The tech industry is an environment of continuous, rapid changes
- IT sector mainly consists of 20-30 year old males from technologically developed countries
- Web-dev and AI/ML skills most on-demand

Implications

- Obtaining at least a bachelors degree is favourable
- It is important for companies and individuals alike to constantly learn and be able to adapt quickly in a fast-changing industry
- Tech training and education for women, older people and less developed countries
- With cloud services on the rise, new possibilities emerge

CONCLUSION

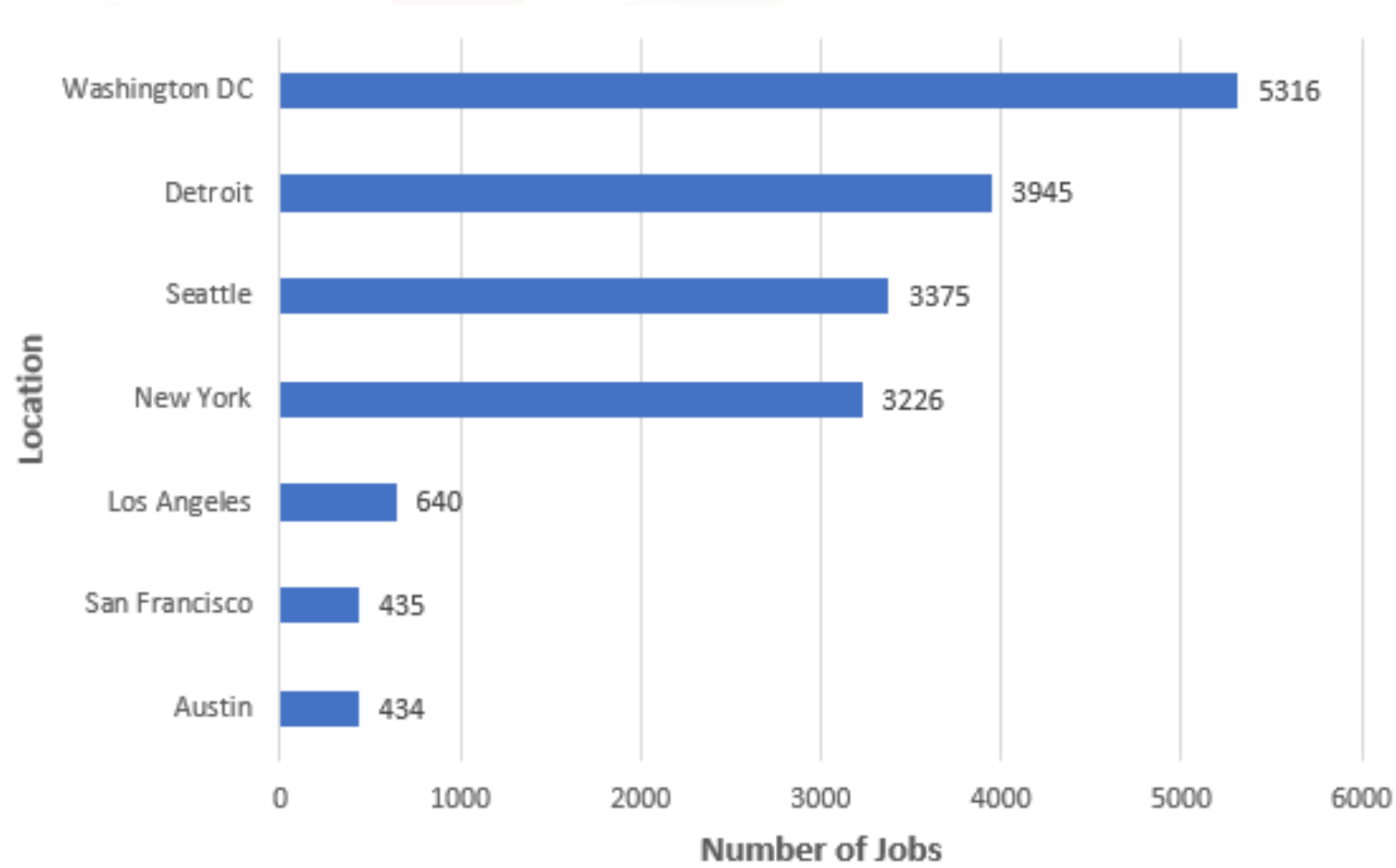


- Technology is evolving and expanding with cloud/web-dev and ML/AI leading the revolution
- Stereotypes still exist in the field
- Developing countries are worth to invest into
- Flexibility, adaptability and versatility are must-haves

APPENDIX



JOB POSTINGS



POPULAR LANGUAGES

