



IBM Capstone Project

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OUTLINE



- Executive Summary
- Introduction
- Methodology
- Results
 - Visualization - Charts
 - Dashboard
- Discussion
 - Findings & Implications
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EXECUTIVE SUMMARY



- Current Technology Usage Trend
 - Language
 - Database
 - Platform
 - Web frame
- Future Technology Trend
 - Language
 - Database
 - Platform
 - Web frame
- Demographic Survey
- Country and Gender Difference

INTRODUCTION



- Analyze technology trends in software and web development among developers in the world.
- Purpose of this Analysis
 - Identify top programming languages, Databases, platforms and Web frames
 - Identify skill requirement in the future
 - Identify human resource gap in the industry
- Audience for this Presentation
 - Programmers
 - IT Industry Leaders
 - Computer Science Students

METHODOLOGY



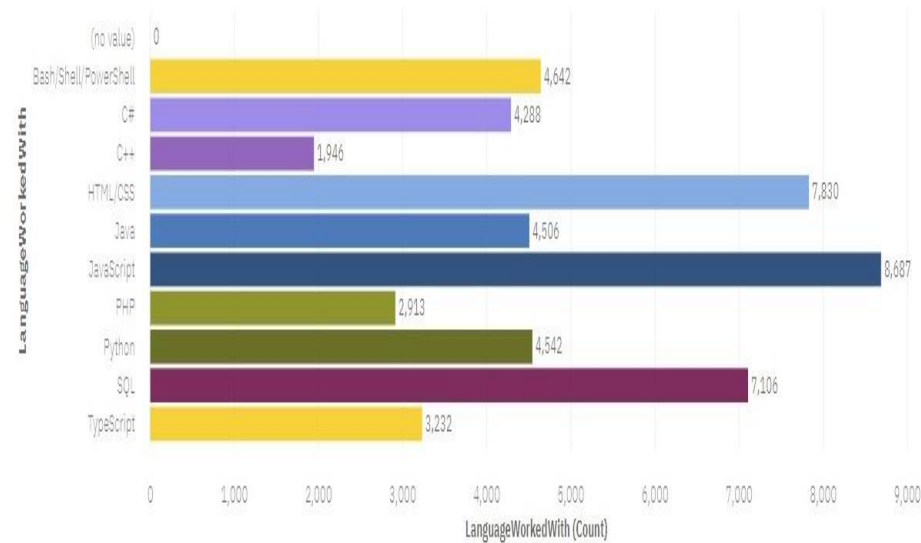
- Data Collection Sources
- Data Wrangling
- Data Exploration
- Data Cleaning
- Data Visualization
 - IBM Cognos
 - Python Matplotlib and Seaborn
 - Presentation

PROGRAMMING LANGUAGE TRENDS

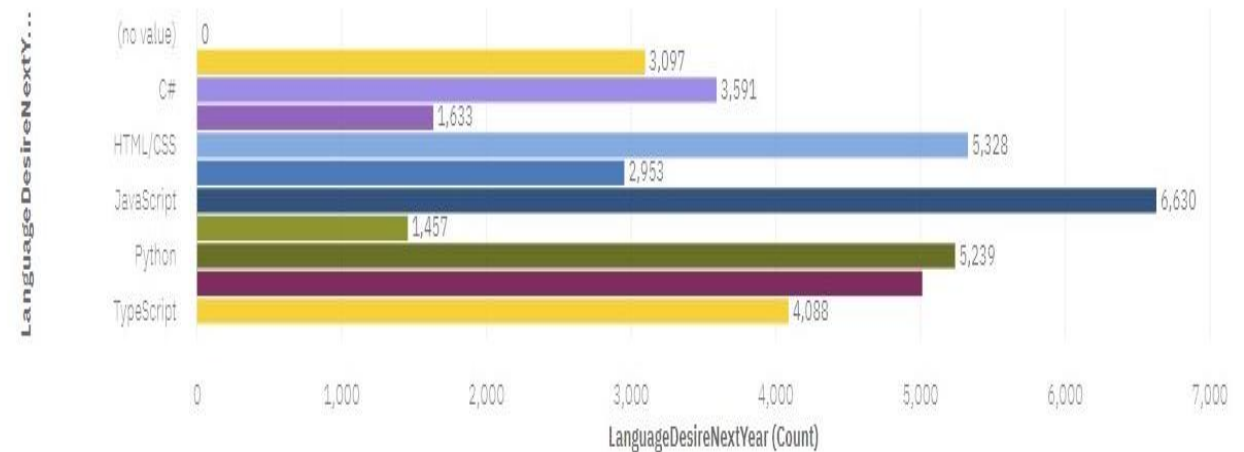
Current Year

Next Year

Top 10 Language Worked With



Top 10 Languages Desired Next Year



PROGRAMMING LANGUAGE TRENDS – FINDINGS & IMPLICATIONS

Findings

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

Implications

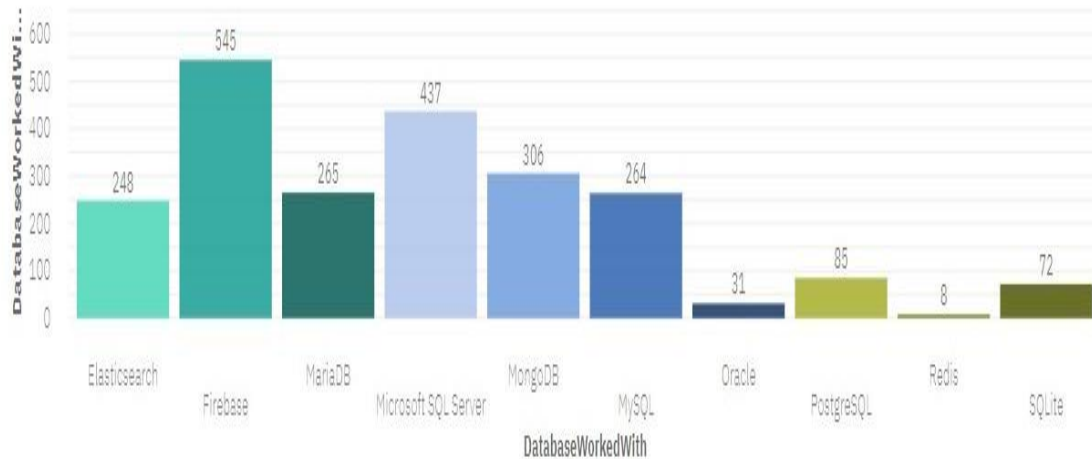
- Web Development and Web Developers are still in high demand.
- Java Script and TypeScript are crucial for developers to learn.
- Python is the new trending language and popular in AI field.

DATABASE TRENDS

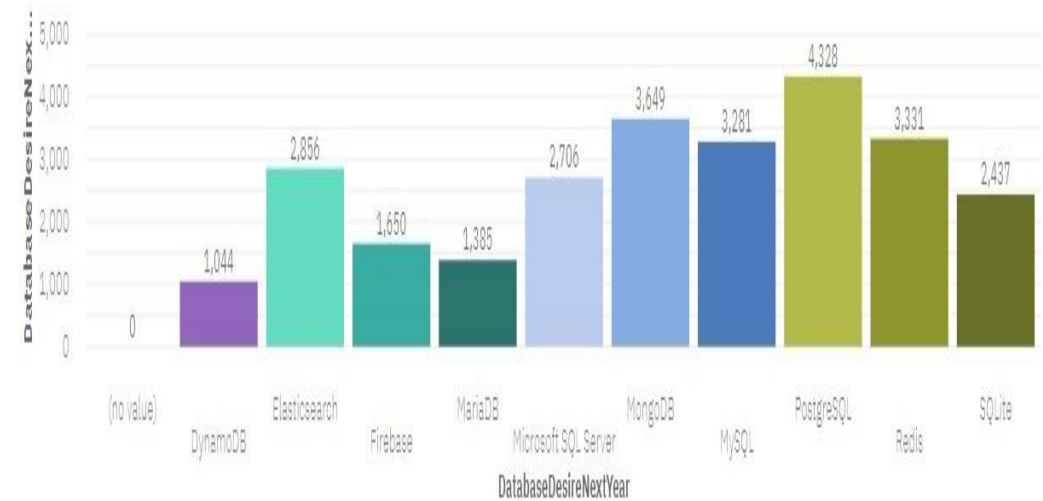
Current Year

Next Year

Top 10 Databases Worked With



Top 10 Databases Desired Next Year



DATABASE TRENDS – FINDINGS & IMPLICATIONS

Findings

- MySQL is the most popular database
- There are still many companies using Microsoft SQL Server
- MongoDB and Redis are the most favorable NoSQL database

Implications

- Open-Source Databases like MySQL are still preferable.
- Software Development and Big Data technology still require SQL
- NoSQL Databases will make an impact for relational databases

DASHBOARD

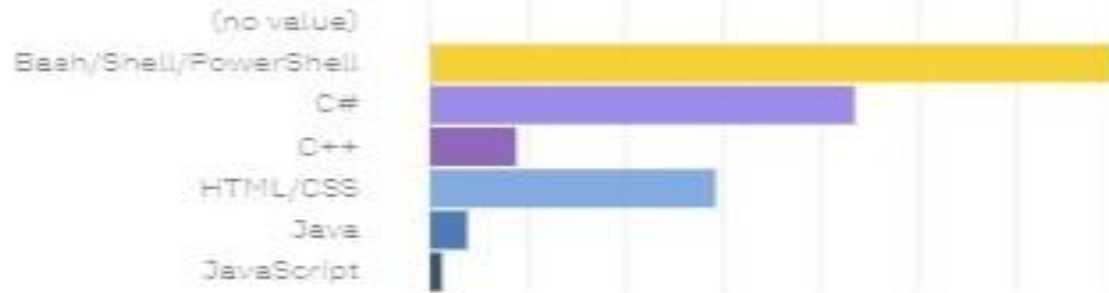


The permanent link of the read-only view of the Cognos dashboard goes here:

<https://eu-de.dataplatform.cloud.ibm.com/dashboards/1b54985f-207e-416b-ba62-5a546cb06a4e/view/037fd60124892ac449ebc4e407cc2d047b367055b5bbd15289d77b495e612297a9381b91c87d4a5add470331f5ec475dc8>

Current Technology Usage

Top 10 Language Worked With



Top 10 Databases Worked With

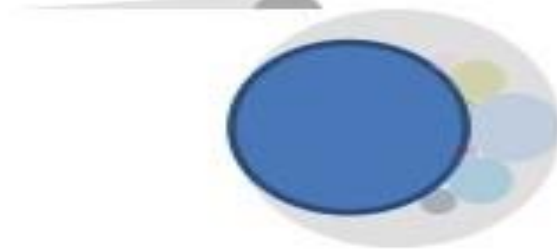


Platforms Worked With



Top 10 WebFrameWorked With.

WebFrameWorke...



Future Technology Trend



Demographics



DISCUSSION

- Technology Usage Trends Now and Then
- Gender, Age and Discrimination in IT industry

OVERALL FINDINGS & IMPLICATIONS

Findings

- Technology trend change every year.
- USA is the top technology country
- There are extreme gender and age discrimination

Implications

- Programmers should always follow latest technology trends
- More countries should have the equal chance to be exposed to new technology.
- Gender and Age should not be one of the concerns or benefits of employment.

CONCLUSION



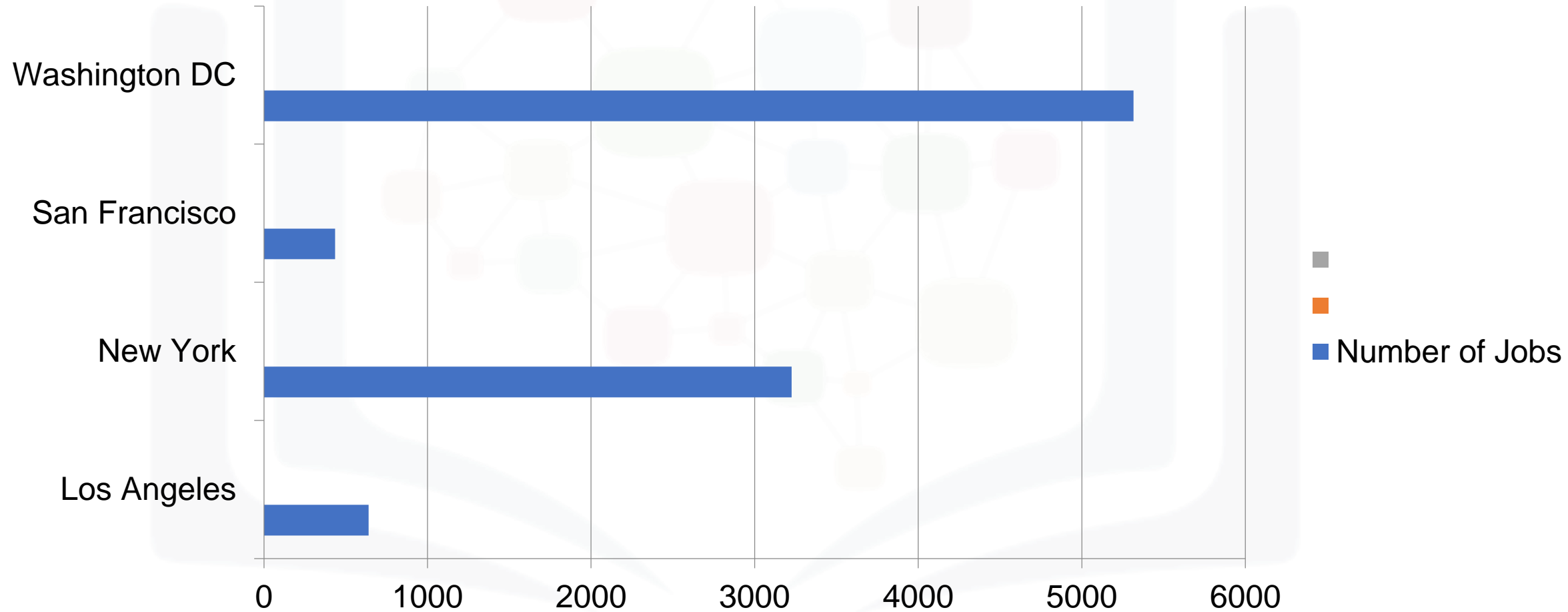
- Technology Trends
- Programming languages, Databases, Platforms and Web frame trends
- Demographic Trends
- Gender and Education
- Programming Language and Salary Trends

APPENDIX



- IBM Cognos Dashboard Embedded (CDE) is an AI-fueled business intelligence service that supports the entire Data Analytics cycle from Discovery to . It provides users with data discovery capabilities to visually explore and interact with their data to identify the key insight for improving data driven decisions. Users can perform data discovery and quickly assemble the information onto the dashboard, all without the formal training.

JOB POSTINGS



POPULAR LANGUAGES

