TECHNOLOGY-IN-DEMAND FOR IT INDUSTRY ANALYSIS

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OUTLINE

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EXECUTIVE SUMMARY

- After taking users' interests, employers' demands, and compensation into considerations, popular programming languages are JavaScript and Python
- Regarding to popular database software are PostgreSQL and MongDB

INTRODUCTION

- Background

The technologies applied in IT industry keep changing and progressing, so that to remain competitive, it is required to regularly check the emerging technologies and skills.

- Audience

IT and business consulting service firm

- Aim

Identify trends and insights of technologies in demand.

METHODOLOGY

1. Generate data from varied sources:
   - Github job posting (API)
   - Average salary against different languages from IBM website (Web scrapping)
   - Developer survey from Stack Overflow (API)

2. Data wrangling and analysis using Python

3. Visualize results with appropriate graphs using IBM Cognos Analytics

RESULTS

Visual Charts
Dashboard

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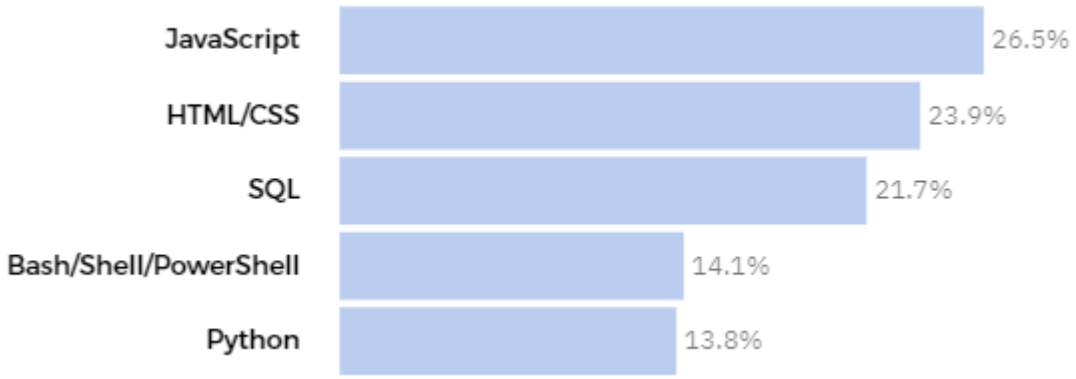
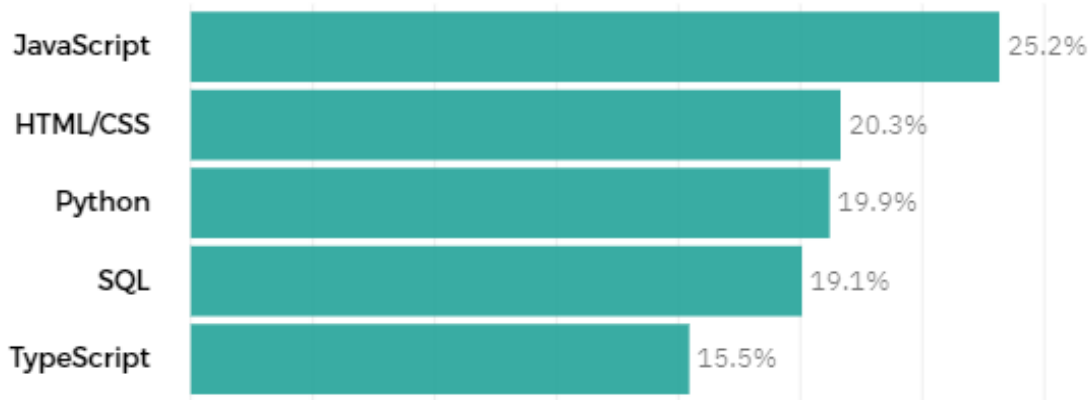
PROGRAMMING LANGUAGE TRENDS

Top 5 for current year



Top 5 for next year



PROGRAMMING LANGUAGE TRENDS - FINDINGS & IMPLICATIONS

Findings:

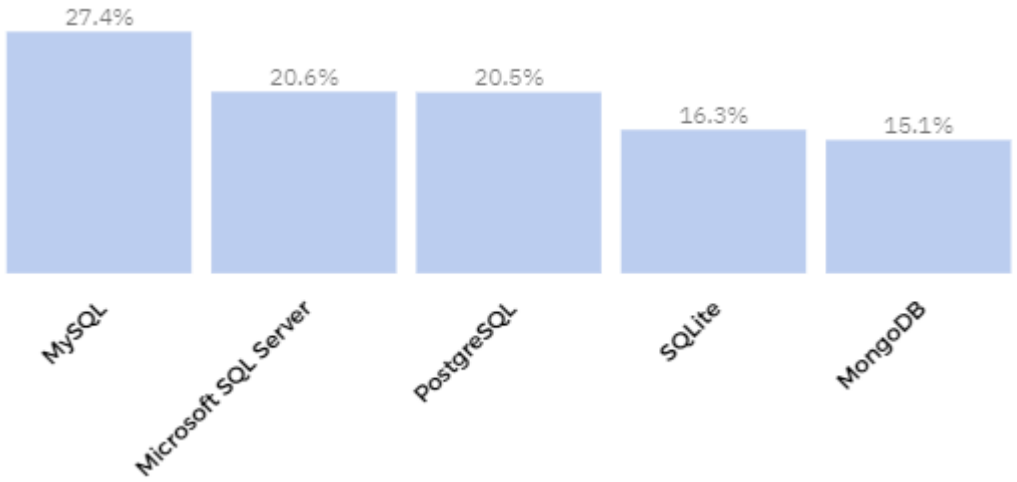
- JavaScript & HTML/CSS remains the top applied and also liked programming language
- Python and TypeScript has risen in the ranks for liked language
- Bash/Shell/PowerShell has been edged out of the top 5 for liked language

Implications:

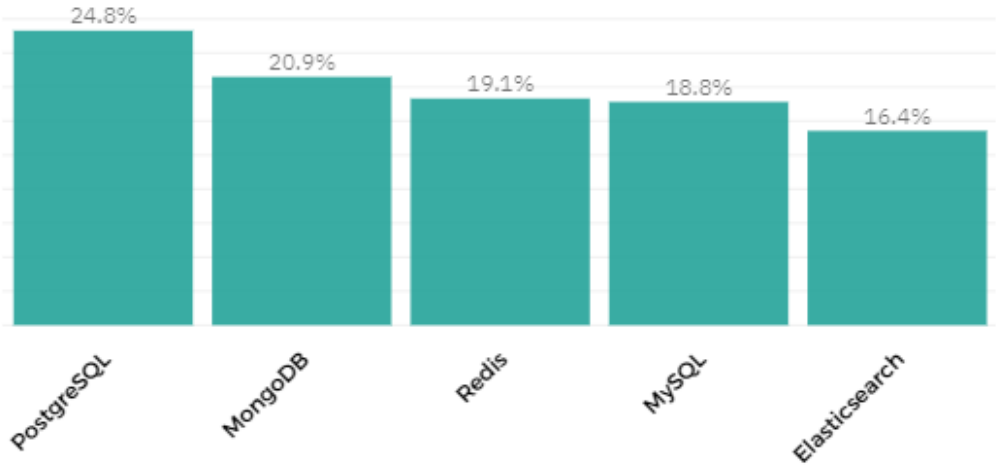
- JavaScript & HTML/CSS remains competitive programming language.
- Python language has been commonly used and become increasingly popular
- TypeScript sees increasing interests among developers

DATABASE TRENDS

Top 5 for current year



Top 5 for next year



DATABASE TRENDS - FINDINGS & IMPLICATIONS

Findings:

- Only 3 of 5 utilised as the top 5 for the current year will still be in the top 5 for next year
- PostgreSQL and MongoDB has risen in the ranks for the top 5 liked for the next year
- MySQL has fallen in the ranks but still remains the top 5 liked for the next year

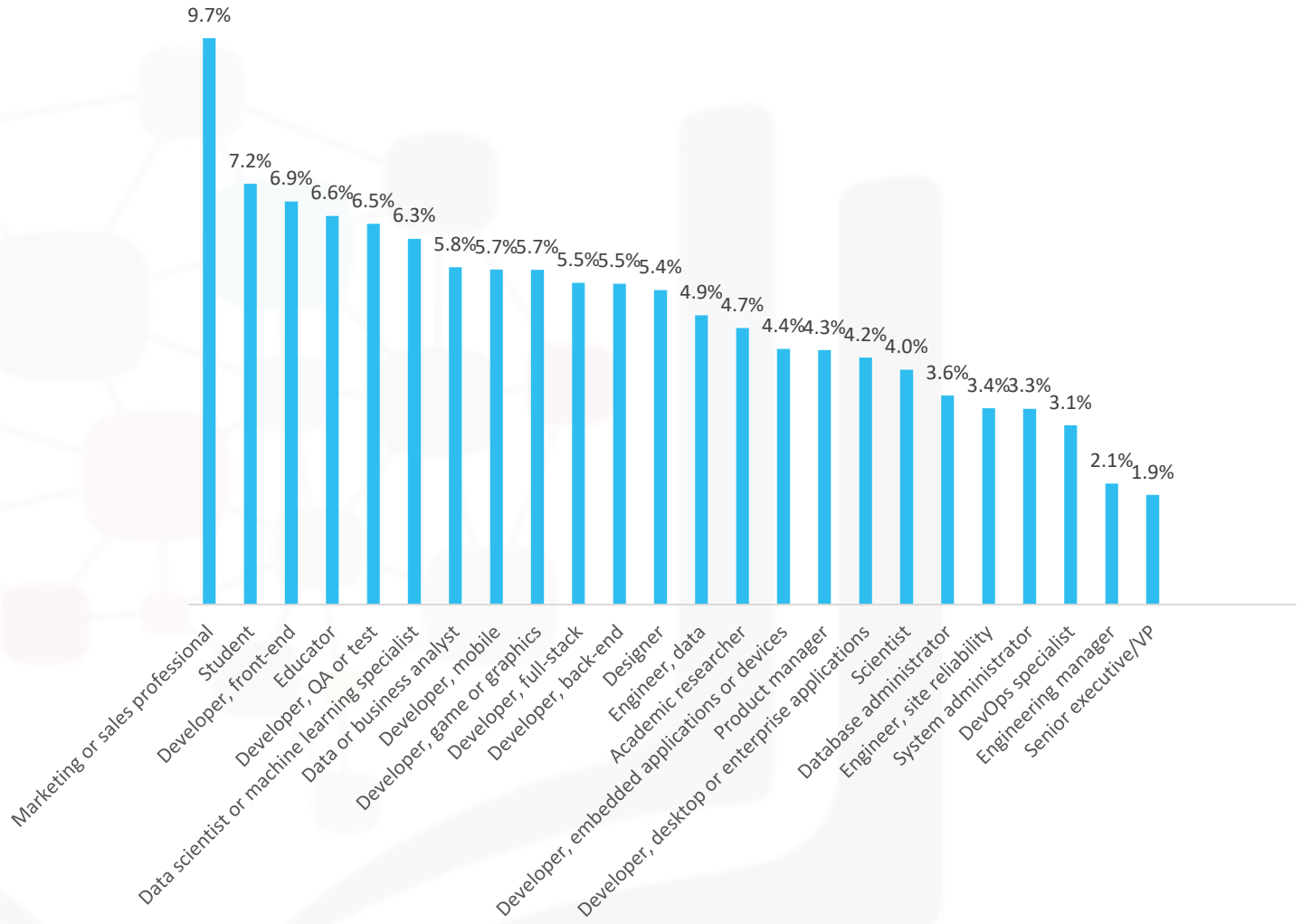
Implications:

- The users' interests in database tend to be volatile.
- PostgreSQL & MongoDB have become commonly used database and increasingly popular as well.
- MySQL become less competitive.

Woman in IT Industry

According to the figure of percentage of woman in different sections shows that:

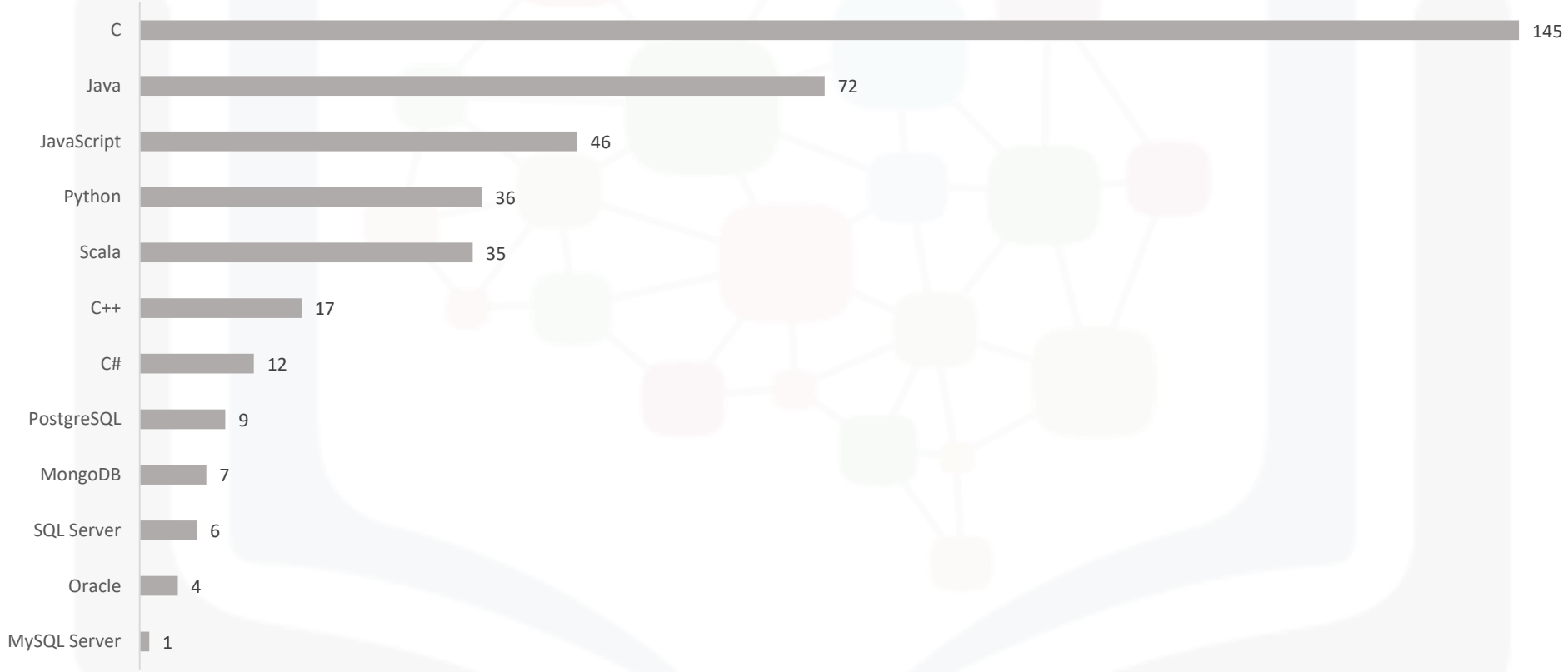
- The average percentage is 5.0%
- The section that woman shows most presence is more business related, while least is senior executive



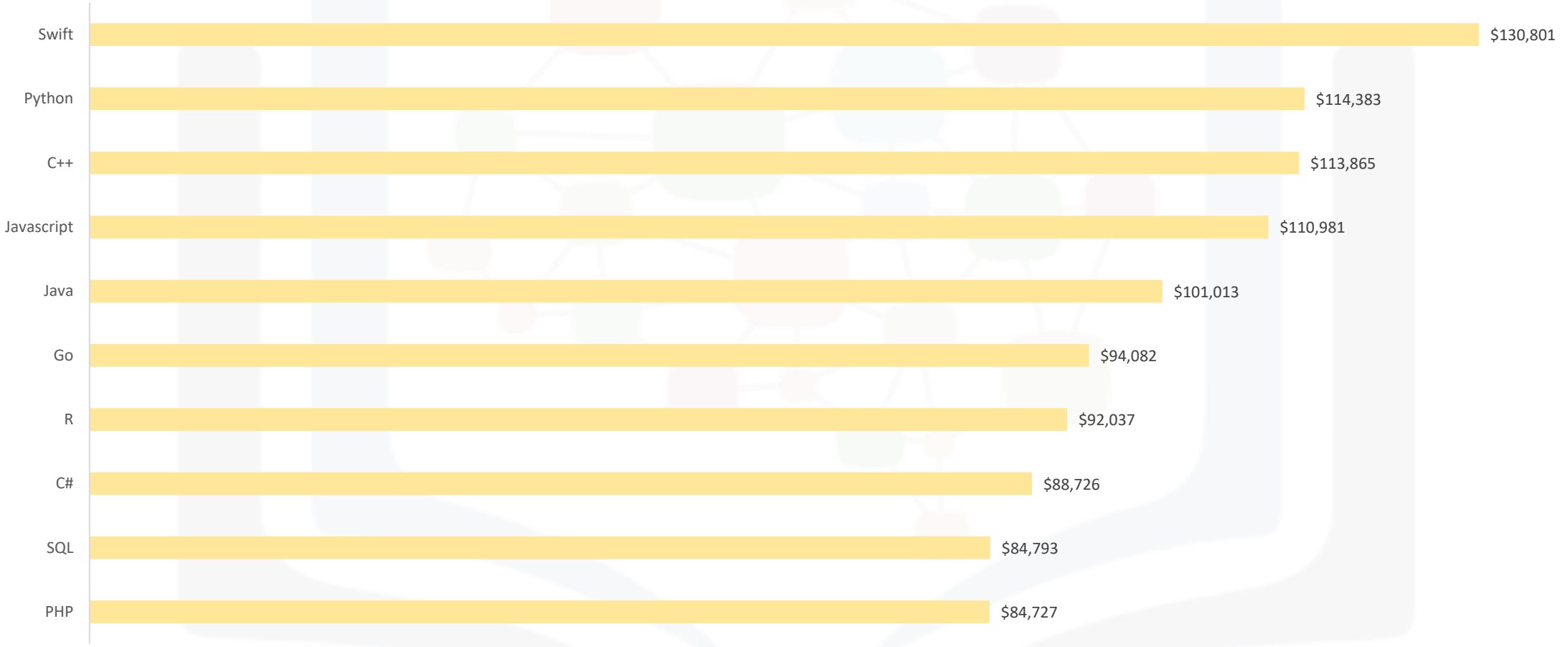
IBM Developer

SKILLS NETWORK

GITHUB JOB POSTINGS



POPULAR LANGUAGES



DASHBOARD

Besides of technologies, full dashboard from the survey results also address demographic information:

Dashboard Link

DISCUSSION

? Is there any difference in terms of demand of programming languages between users' side and employers

? How does the salary correlate with the demand?

OVERALL FINDINGS & IMPLICATIONS

Findings:

- 2 languages are among all top 5 ranks (currently used, want to use, jobs posted, and average annual salary) are Javascript and Python
- C language currently has the most jobs posted, however, not in the top 5 currently used technology
- The top 3 jobs posted regarding to database only are PostgreSQL, MongoDB, and SQL Server

Implications:

- Javascript and python are 2 languages are popular among developers and in demand in the job market as well
- There may be a gap between the demand and supply for C language
- For database, more users want to use PostgreSQL and MongoDB, and they have relativly more jobs as well