



# <Final Capstone Project>

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# OUTLINE

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

# EXECUTIVE SUMMARY

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- An extensive analysis was made on a 2019 Stack Overflow survey for software professionals.
- Important information on current technologies was found:
  - The most used programming language was JavaScript
  - The most used database was MySQL
  - Most used OS was Microsoft
- The distribution of most desired languages is very similar to that of most used languages.
- Most people want to learn to use PostgreSQL
- A lot of people want to start using Linux

# INTRODUCTION

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- The world of software developing is rapidly evolving.
- This industry has become one of the most highly compensated.
- For this reason, it is important for people to stay updated in their skills and to become desirable for organizations
- To achieve this, it is important to:
  - Understand which abilities are the most valuable in the current moment.
  - Develop new skills that will be in higher demand in the future.

# METHODOLOGY

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- The source of the data was a 2019 Stack Exchange survey directed towards software professionals
- Prior to the report, data was extracted, cleaned and analyzed.
- Duplicate values were removed, blank entries were replaced with fitting values.
- Numerous graphs and visualizations were made to better understand the layout of the data
- A dashboard was created to present the findings

# RESULTS

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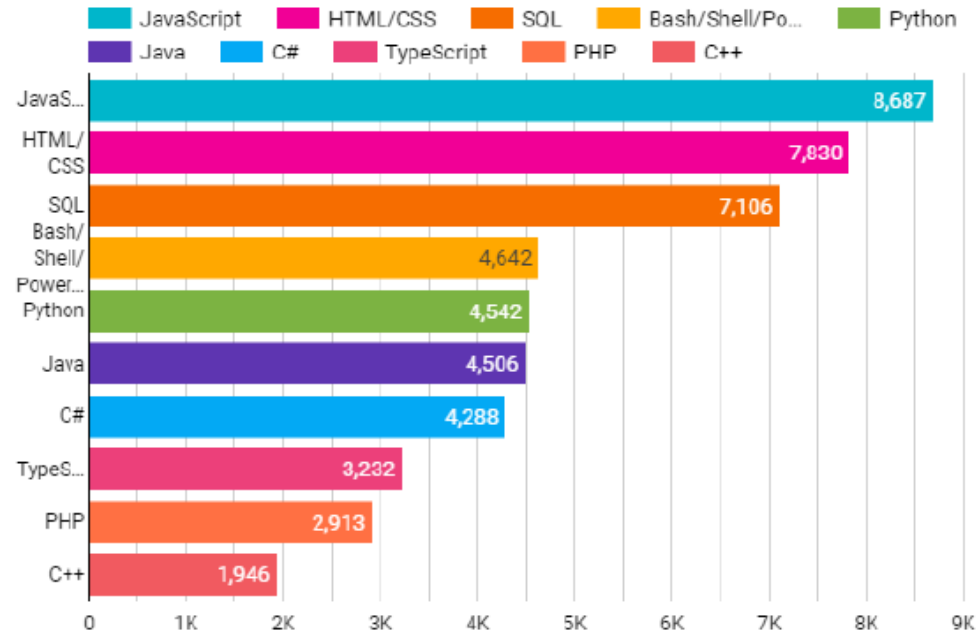
- The most used programming language, which is also the one with the highest demand in for the future, is JavaScript.
- Most used querying language is SQL, with the current use of MySQL database, looking to addition the use of PostgreSQL
- The most commonly used operating system currently is Windows, while a good amount of people wish to start using Linux.
- The most used web frame currently is jQuery, with a future rise in the use of React.js



# PROGRAMMING LANGUAGE TRENDS

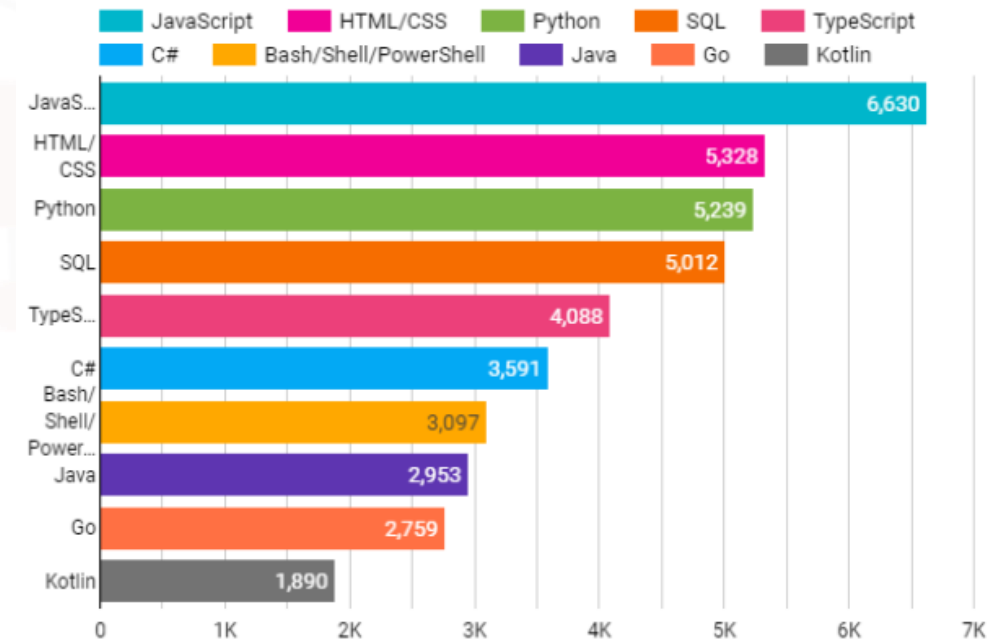
## Current Year

Top 10 Languages Worked With



## Next Year

Top 10 Desired Languages for Next Year



# PROGRAMMING LANGUAGE TRENDS - FINDINGS & IMPLICATIONS

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## Findings

- Both distributions, current and future, are very similar
- Most desired language is JavaScript
- It is closely followed by HTML

## Implications

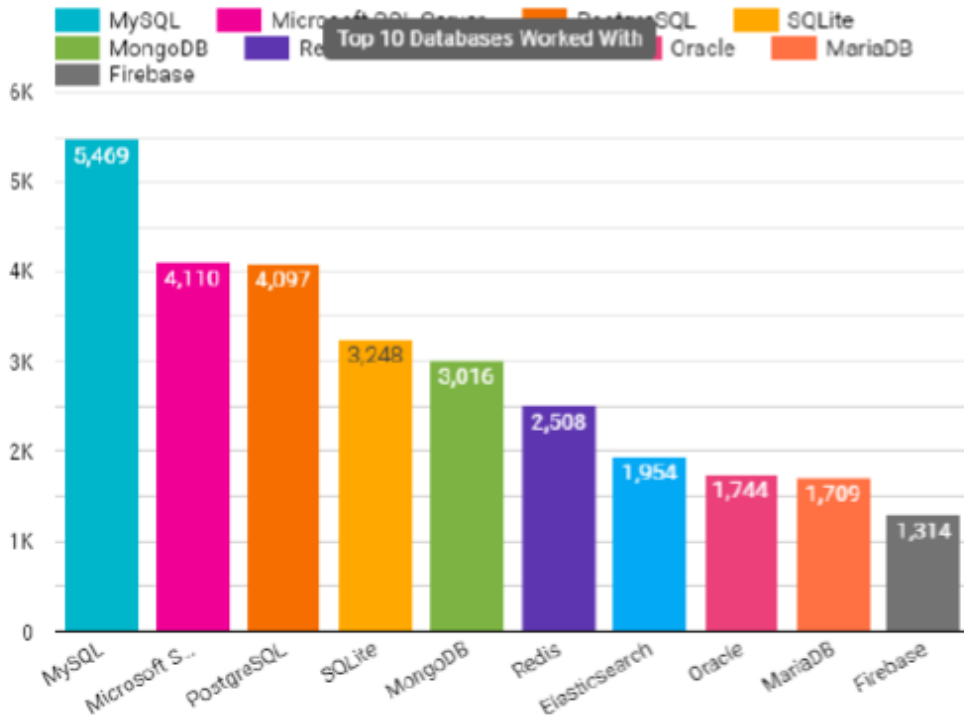
- Web page development is an ability that is in high demand
- Developers should focus on improving on this area
- Skills in Python are also growing to be more valuable.



# DATABASE TRENDS

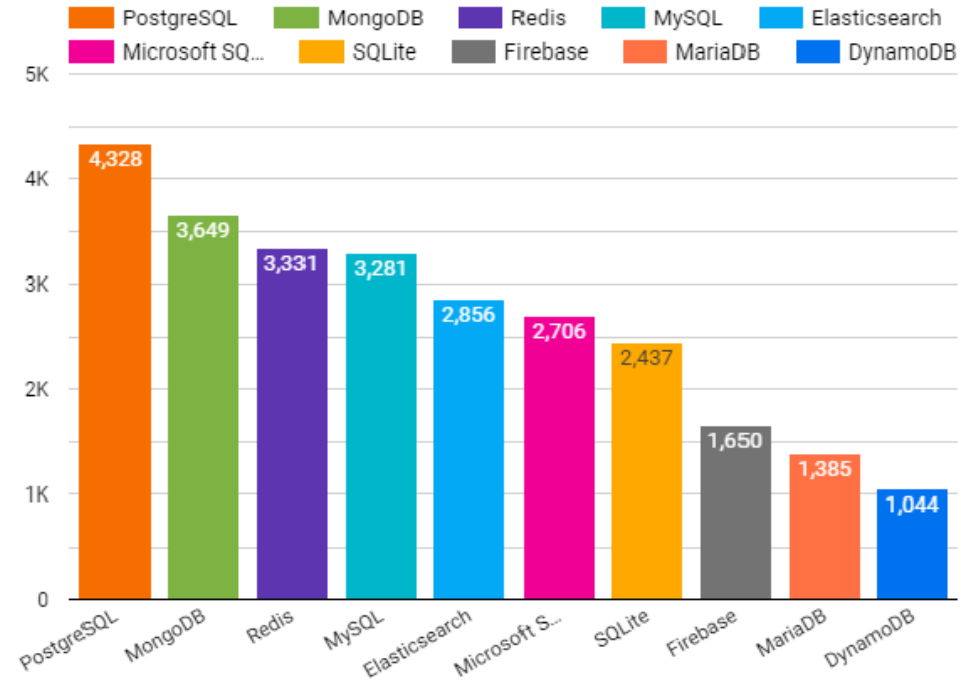
## Current Year

Top 10 Databases Worked With



## Next Year

Top 10 Desired Databases for Next Year



# DATABASE TRENDS - FINDINGS & IMPLICATIONS

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## Findings

- SQL is the most dominant querying language
- Most used database is MySQL
- The use of PostgreSQL and MongoDB is increasing

## Implications

- Knowledge of SQL is a must have in data professions.
- Dominant use of PostgreSQL and MongoDB will prove to be very valuable in the future.

# DASHBOARD

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<https://github.com/ja-gonzalezv1/data/blob/3aa3b8501ab6f8401f38632a86ba3837469250f5/Google%20Looker%20Dashboard1.pdf>

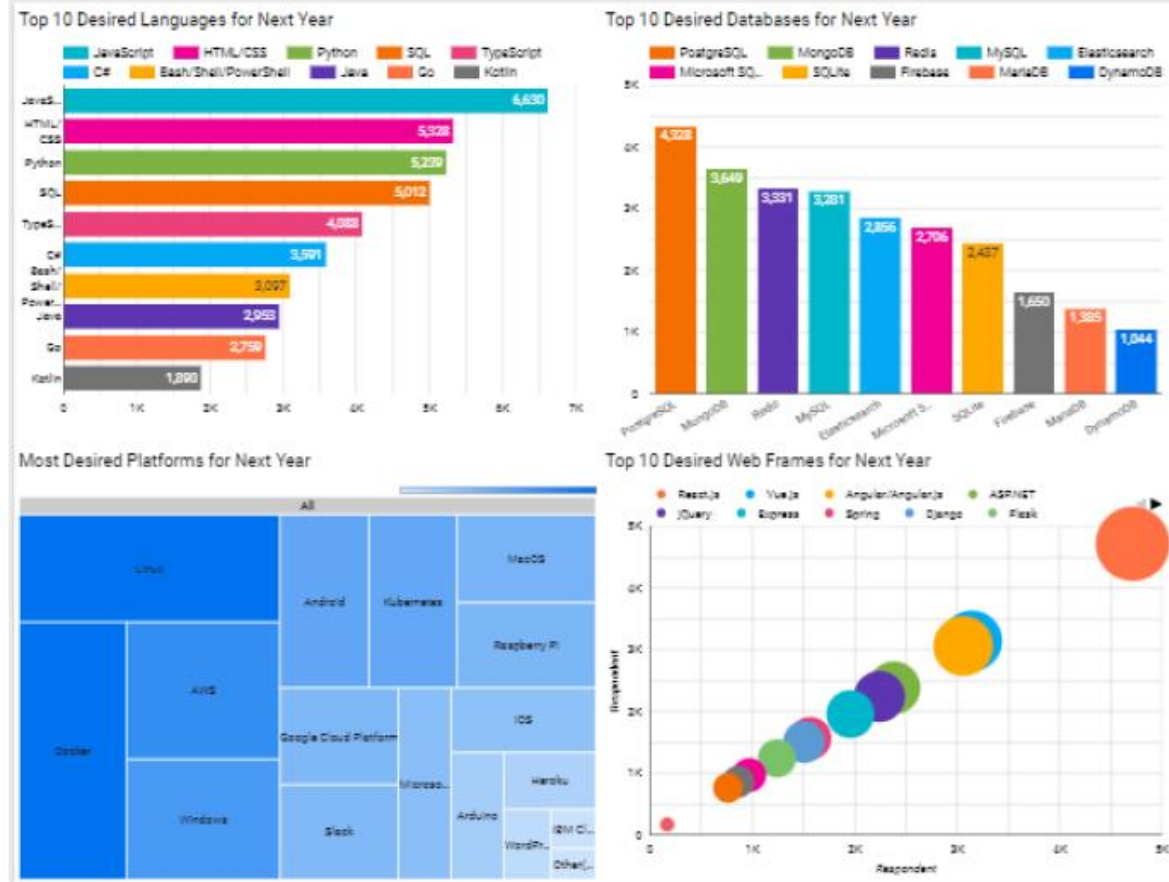
# DASHBOARD TAB 1 - Current Technology

## Current Technology Usage:



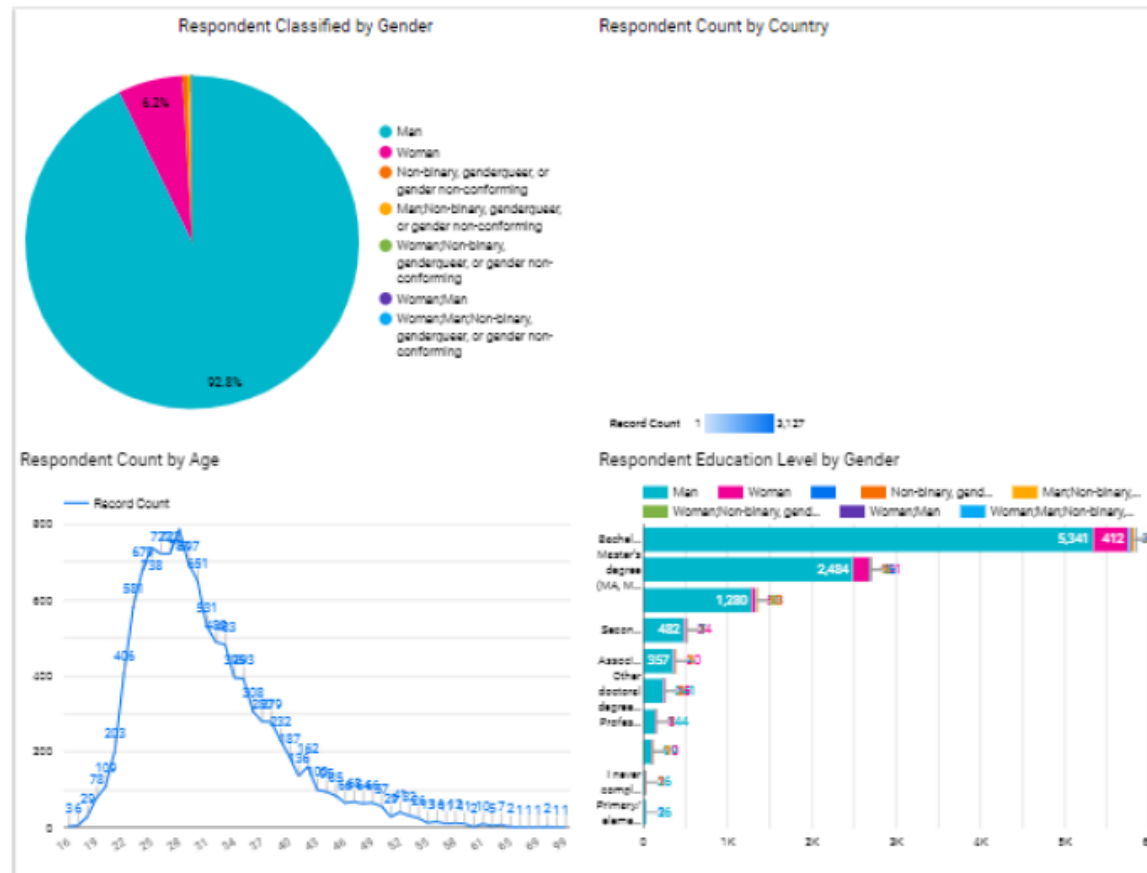
# DASHBOARD TAB 2 - Future Technology

## Future Technology Trend



# DASHBOARD TAB 3 - Demographics

## Demographics



# DISCUSSION - TO CONSIDER

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- This results invite to think about our current developing skills.
- What will be the future of the industry? Which skills will be the most desired?
- What can I do today to improve my position for my professional future?

# OVERALL FINDINGS & IMPLICATIONS

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## Findings

- Web development is one of the most, if not the most desirable skill in a professional developer
- Knowledge of SQL is crucial for any job involving data

## Implications

- High ability in JavaScript and HTML can help improve professional standing.
- It can be hard to thrive in a data profession without knowledge of SQL querying.



# CONCLUSION

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- JavaScript and HTML are the languages to learn
- Web page development is a good choice for professional development, good chance to find opportunities in it
- Almost all databases used function with SQL. This makes it an important tool to have.
- It will also be useful to have good abilities with Python.

# APPENDIX

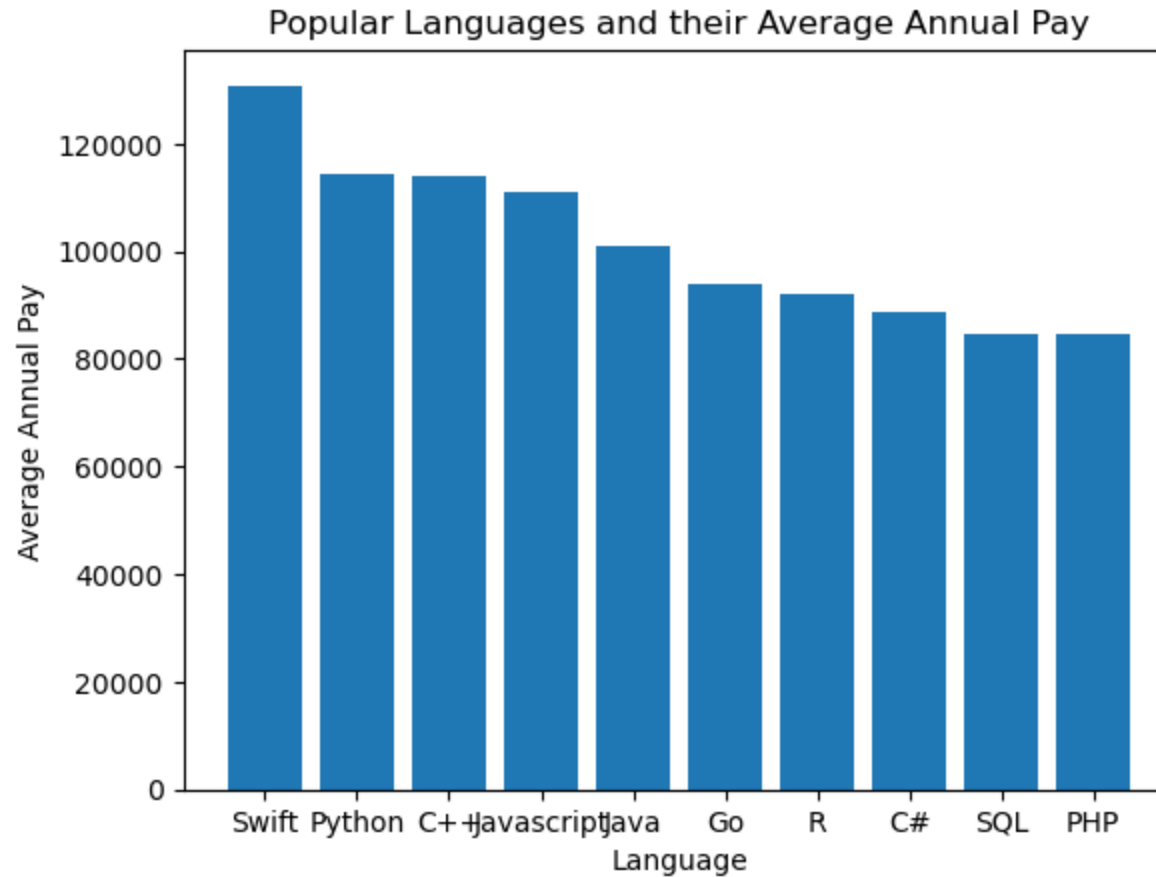
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- Data used for the analysis:
- <https://stackoverflow.blog/2019/04/09/the-2019-stack-overflow-developer-survey-results-are-in/>
- Extra data for popular language findings and job postings from GitHub

# Popular Languages and their Average Annual Pay

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# Job Postings for Popular Languages

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