

Skill Gap Analysis

Bridging the Gap Between Education and Industry

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Introduction

- Identify the gap between student skills and employer expectations.
- Help colleges align training programs with industry needs.
- Focus on technical and soft skill development.

Objectives

- Analyze students' technical and soft skills.
- Identify the most lacking skills.
- Suggest strategies to bridge the gap.
- Visualize insights using Power BI.

Python Data Cleaning Summary

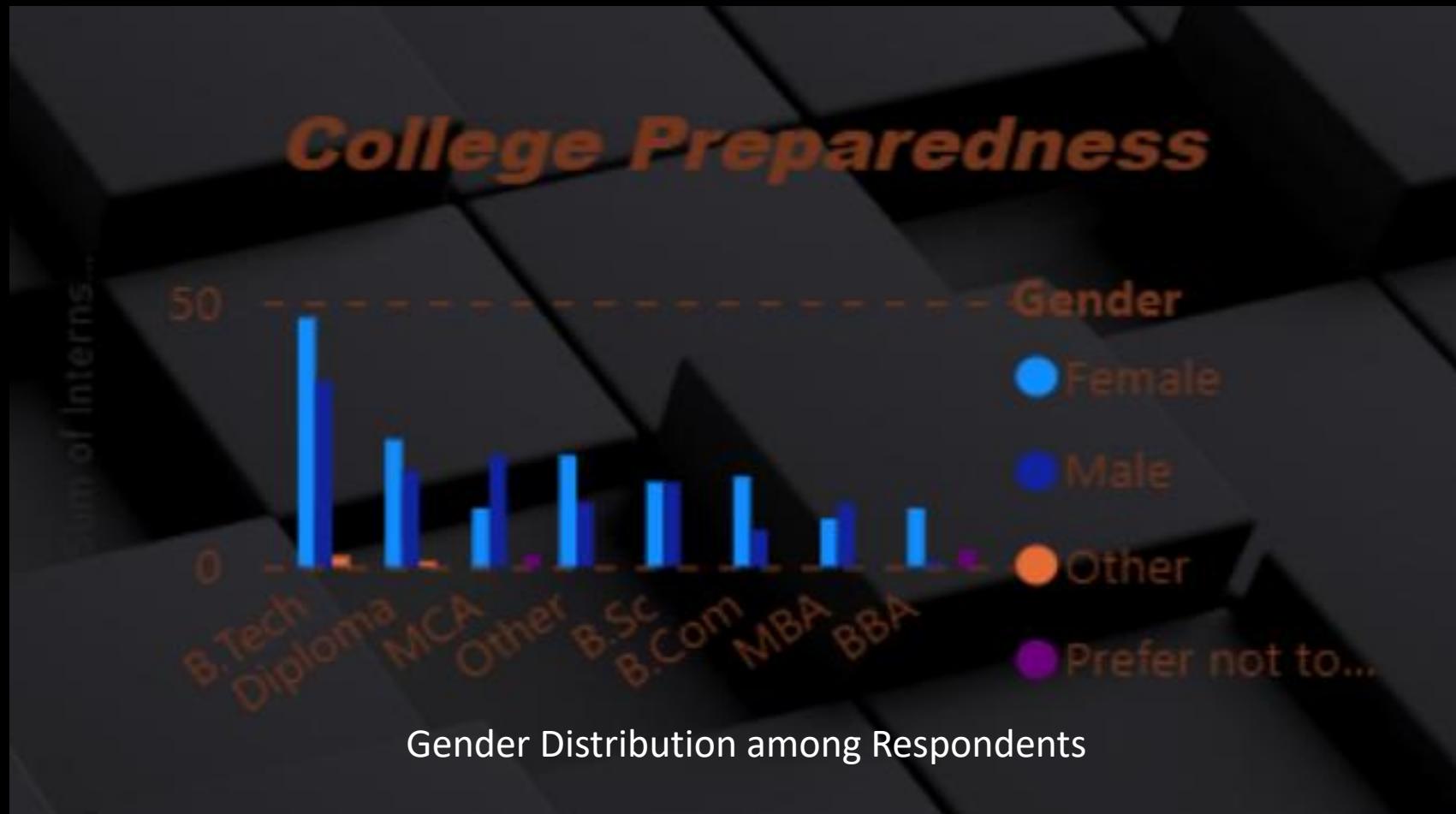
- Used Pandas for data inspection, missing value handling, and cleaning.
- Removed duplicates, standardized text (Yes/No fields).
- Filled missing values with mode/median.
- Exported cleaned data to Excel.
- Final dataset shape: 300 rows × 27 columns.

Dataset Overview

Columns include: Gender, State, Qualification, Major, Internship Count, Technical Score, Problem Solving, Communication, etc.

Verified data integrity using df.info(), df.shape, and df.isnull().sum().

Dashboard Visual



Dashboard Visual

Qualification vs Internship Count



Dashboard Visual

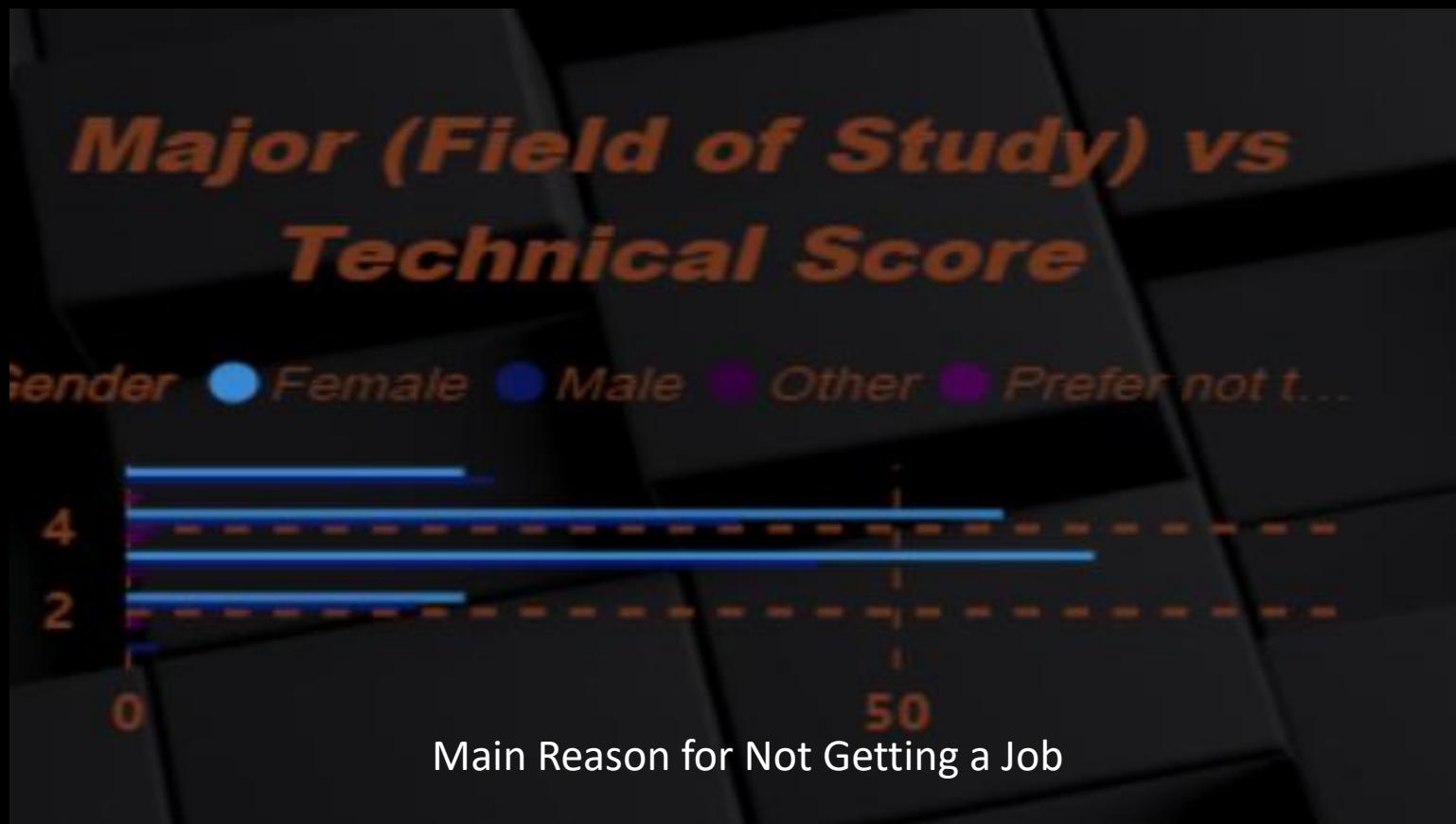
Main Reason for Not Getting Job

Gender Female Male Other Prefer not to say

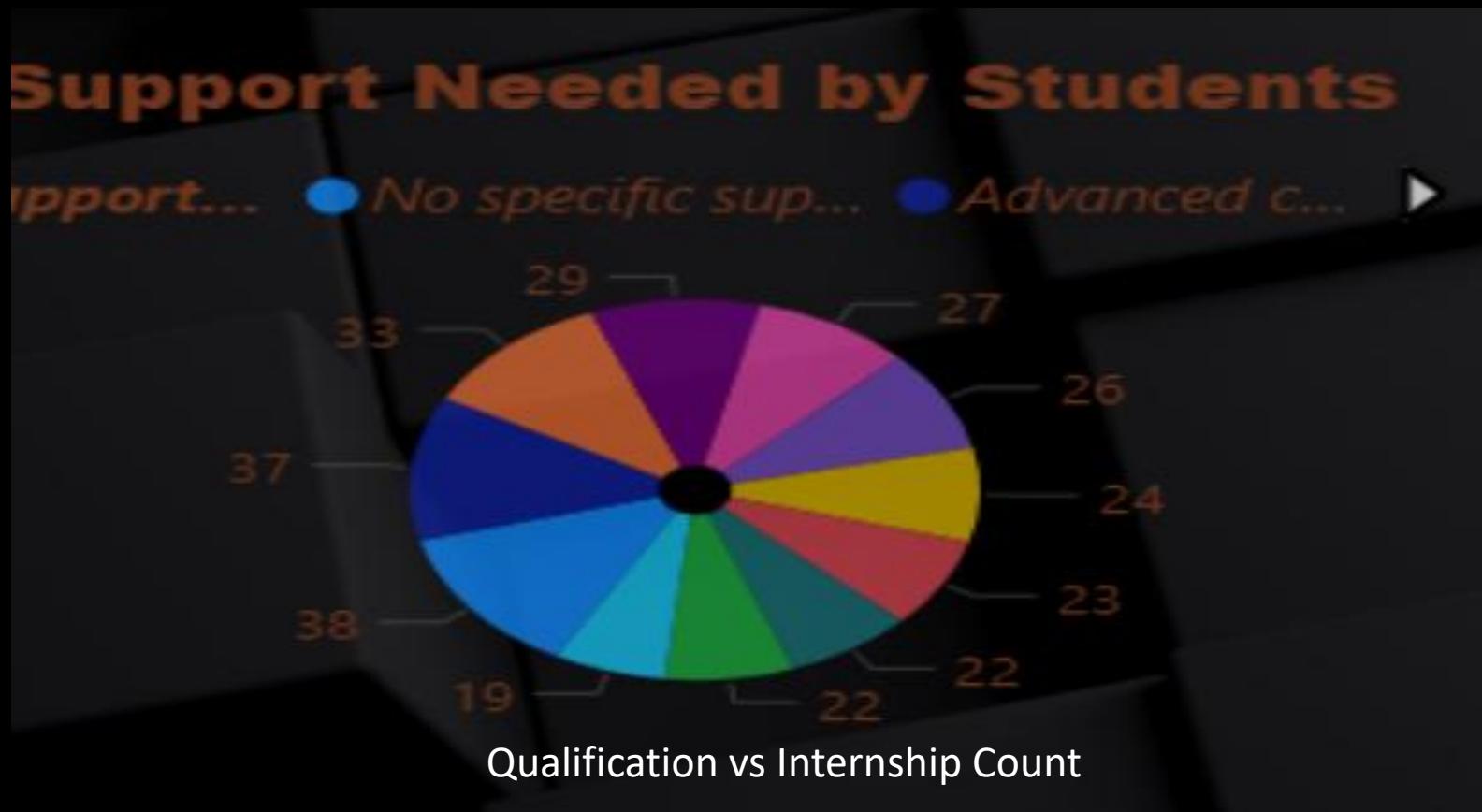


Major vs Technical Score

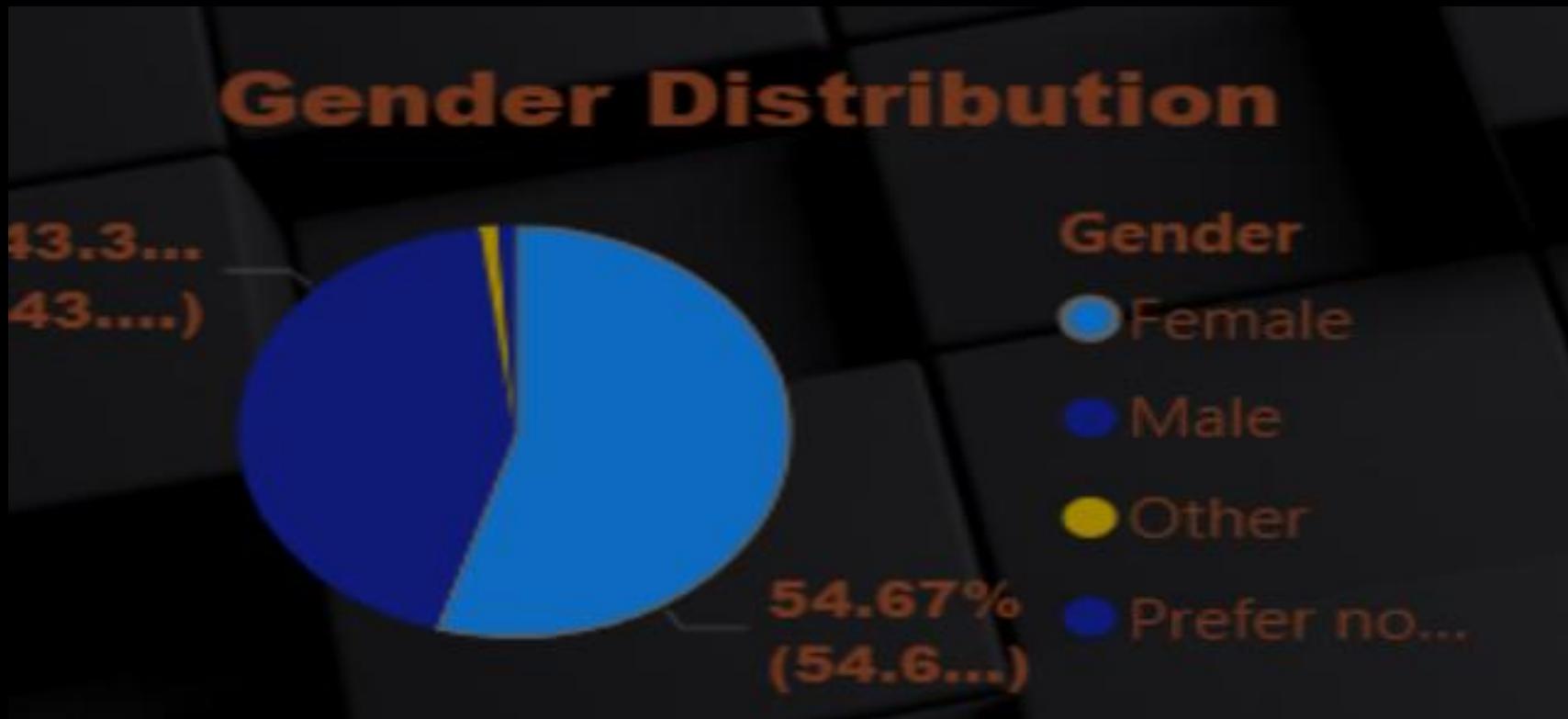
Dashboard Visual



Dashboard Visual



Dashboard Visual



College Preparedness by Qualification

Key Insights

- Python, Excel, and SQL are top technical skills.
- Communication and teamwork need improvement.
- 60% of students lack internship experience.
- Most students request career guidance & workshops.

Interpretation

- Education focuses more on theory than practice.
- Employers expect real-world exposure & soft skills.
- Colleges need to enhance industry integration.

Recommendations

- Add internship-based learning modules.
- Conduct technical bootcamps & soft skill sessions.
- Introduce mentorship programs.
- Collaborate with industry professionals.

Future Scope

- Conduct real survey with more respondents.
- Compare gender-wise & course-wise gaps.
- Automate dashboards for real-time updates
- Add AI insights for better skill predictions.

Conclusion

- The skill gap can be reduced through internships, projects, and hands-on training.
- Balanced technical & soft skill focus improves employability.
- This study supports actionable improvements for education systems.

Thank You

Questions?

Skill Gap Project – Modern Dark Theme (Black & Orange)