IIT Guwahati

Placements Data Analysis

“Comprehensive analysis of placements data to glean inside into career trajectories recent Industries trends"

Agenda

links: Kaggle Placements 2022.
: IITG Placements 2023.

Benifits: provides actionable insights into academic and industry trends.

- Introduction
- Background
- Dataset
- Motivation
- Goals and Strategy
- Block Diagrams & Chart
- Pseudo CODE
- Graphical Analysis
- Results
- Observations
- Conclusions

Add Company Name

Introduction to project

- The data set of Placements 2021-22 is collected from Kaggle website
- The data set of Placements 2022-23 is collected from official website of IITG

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Background

2022

Placements data analysis of only B.Tech branch with distinct branches in IITG in this period.

2023

Placements data analysis of only Mtech/Mdes/Msc/MA branch with distinct branches in IITG.

Present

Placements are Ongoing for current year 2023-2024.

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Motivation.

"As a data enthusiast, I am driven by the curiosity to uncover patterns and trends within placement data. Exploring the consecutive years of 2022-23 provides a unique opportunity to understand the evolving dynamics of student placements. Through this project, I aim to extract meaningful insights that not only contribute to informed decision-making but also empower stakeholders with a deeper understanding of the factors influencing placement outcomes."

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Goals & Strategy

Comprehensive Insight:

Gain a comprehensive insight into placement trends for the academic years 2022-23. Analyze placement data to identify key patterns and trends.

Departmental Comparison:.

Compare placement outcomes across different departments. Use visualizations to highlight variations and similarities in placement metrics.

Correlation Analysis:

Understand the relationships between various placement variables. Perform correlation analysis to identify factors influencing placement results.

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Block Diagram

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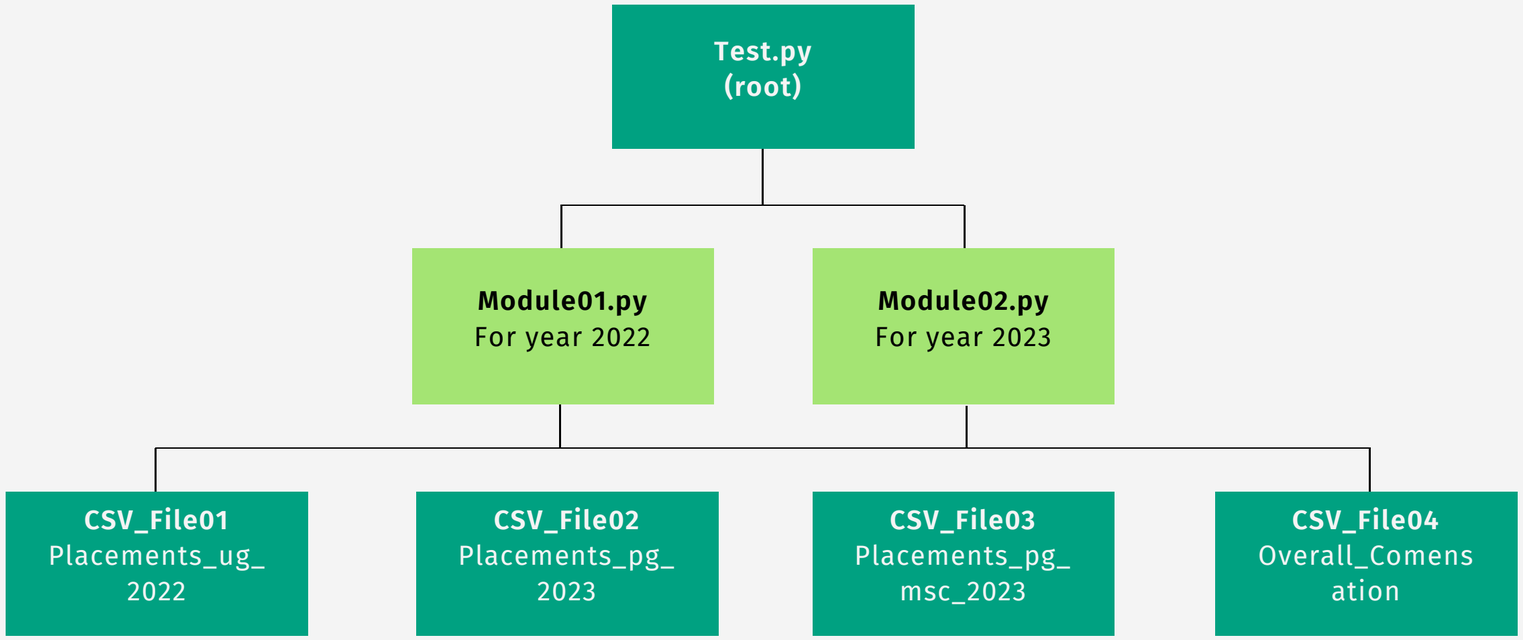
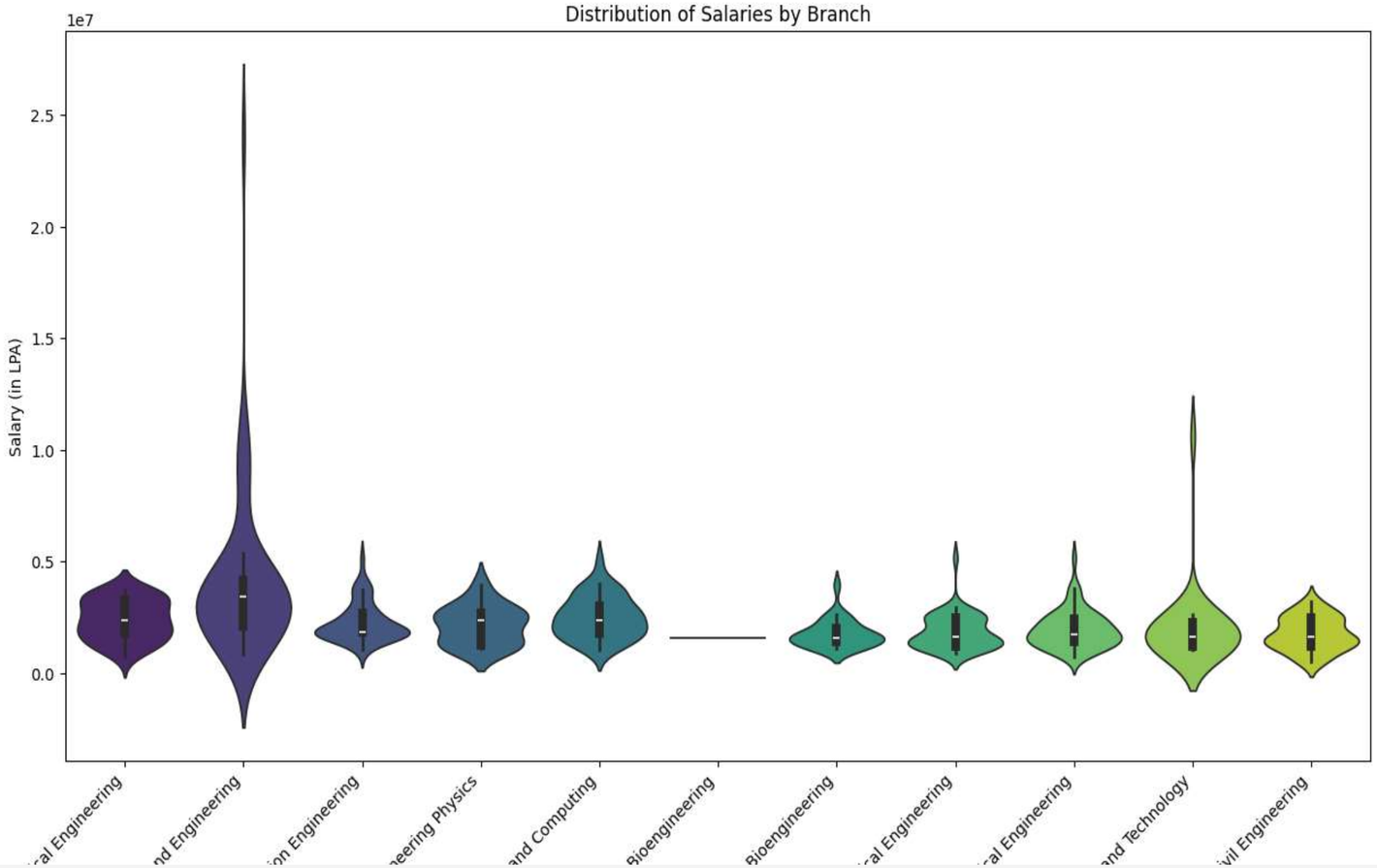


Placements2022

Violin provides information about the salary distribution within each Branch.

Narrower sections may indicate more variation.



Placements2022

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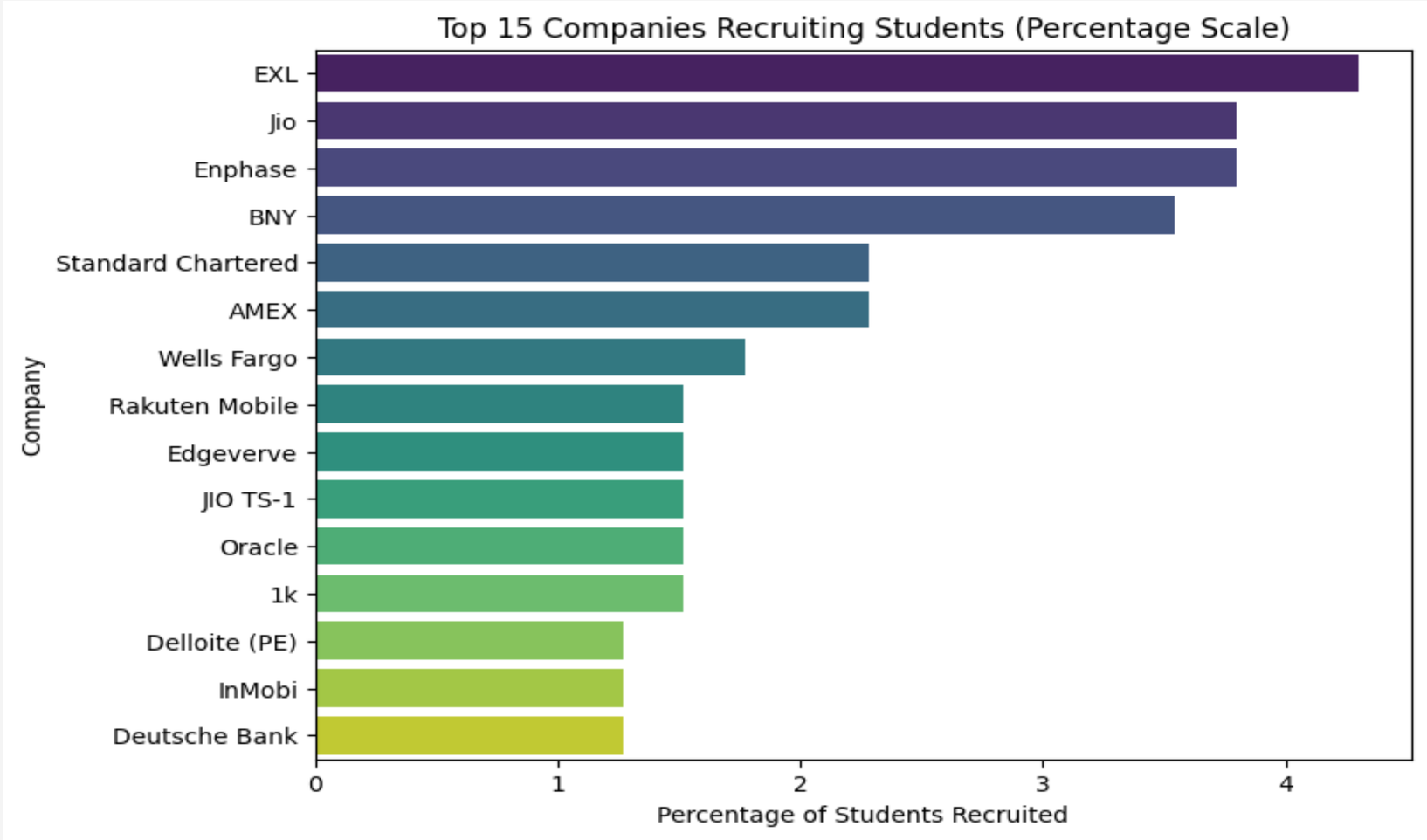

Diagrams : 2023

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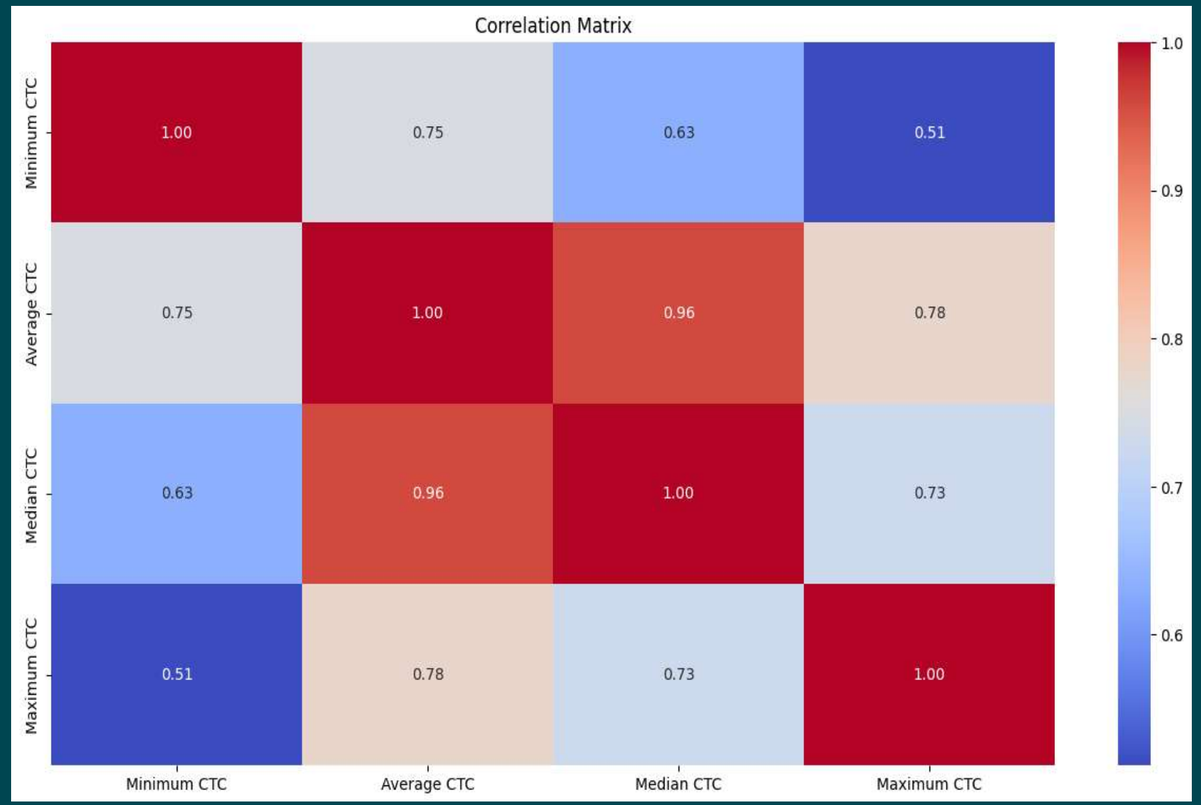
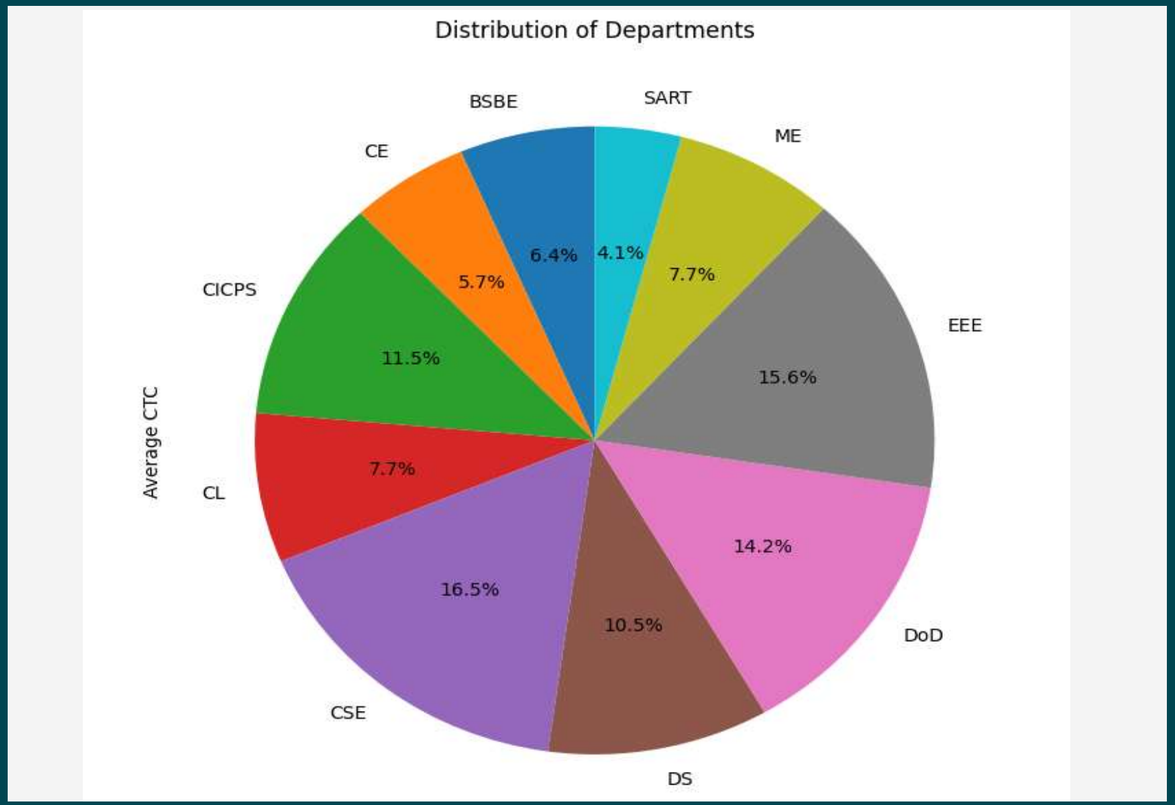
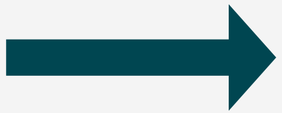




Pseudo Code

```
# Main function for interactive data analysis

while True:
    display_category_choices()
    category_choice = get_user_input()

    if category_choice == 'q':
        break

    data = choose_data_based_on_category(category_choice)

    while True:
        display_plotting_choices()
        plot_choice = get_user_input()

        if plot_choice == 'q':
            break

        call_plotting_function(data, plot_choice)

# Additional data analysis and comparisons
compare_and_plot_datasets(["PG", "PG_MSc"])
compensation_data = read_and_process_compensation_file()
ug_df, pg_df = split_data_into_ug_and_pg(compensation_data)
plot_comparison_between_ug_and_pg(ug_df, pg_df)
```



```
# Main function for interactive data analysis

# Display program title
print_title()

# Read CSV files into DataFrames
ug_data = read_csv_file('ug_placement_data.csv')
pg_data = read_csv_file('pg_placement_data.csv')

# Display summary for each dataset
display_data_summary2(ug_data, "UG Placement Data")
display_data_summary2(pg_data, "PG Placement Data")

# Compare datasets and create bar plots
compare_datasets([ug_data, pg_data], ["UG", "PG"])

# Plot comparison between UG and PG
plot_comparison(ug_data, pg_data)

# Additional data analysis and visualization
compensation_data = read_csv_file('compensation_details.csv')
display_data_summary(compensation_data)

# Create and display various plots
create_and_display_plots(compensation_data)
```

Demonstration

- We'll begin by immersing ourselves in the achievements of our B.Tech 2022 graduates
- Key statistics such as the average CTC, highest CTC, and placement percentage will be showcased.
- Showcasing key placement statistics on the live dashboard.

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SnapShots :

Copy a note, drag to the board, and write your ideas.

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```python
def plot_gender_distribution(data):
    """
    Plot the distribution of gender in the dataset.
    """
    gender_distribution = data['gender'].value_counts()
    gender_distribution.plot(kind='bar', color=['skyblue', 'lightcoral']
    plt.title('Gender Distribution')
    plt.xlabel('Gender')
    plt.ylabel('Count')
    plt.show()
```

```python
def plot_average_package_by_branch(data):
    """
    Plot the average package for each branch.
    """
    average_package_by_branch = data.groupby('Branch')['salary'].mean().sort_values()
    average_package_by_branch.plot(kind='barh', color='green')
    plt.title('Average Package by Branch')
    plt.xlabel('Average Package (in LPA)')
    plt.ylabel('Branch')
    plt.show()
```

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```python
def plot_cgpa_vs_package(data):
    """
    Plot the relationship between CGPA and Package.
    """
    plt.scatter(data['cpi'], data['salary'], alpha=0.5, color='orange')
    plt.title('CGPA vs Package')
    plt.xlabel('CGPA')
    plt.ylabel('Package (in LPA)')
    plt.show()
```

```python
def compare_datasets(data_list, titles):
    """
    Compare summary statistics and create bar plots for multiple datasets.
    """
    for data, title in zip(data_list, titles):
        display_data_summary2(data, title)

        # Select columns for comparison (you can customize these)
        comparison_columns = ['Minimum CTC', 'Average CTC', 'Median CTC', 'Maximum CTC']

        # Create bar plots for selected columns
        for column in comparison_columns:
            plt.figure(fi  (variable) title: Any
            sns.barplot(x                    y=column, data=data)
            plt.title(f'{title} - {column} Comparison')
            plt.show()
```

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Observations

EXL is recruiting more no of students every year.	For Mtech Cse has highest placements and SART has lowest
CE & BSBE students have little bit low plac.	Percentage wise MSC mathematics have more placements than others
Max No of students that are getting placed have CPI in between 7.0 to 8.0	No Of count is 1 for histogram related to DMRR branch

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Do you have any questions?

Feel free to reach out!

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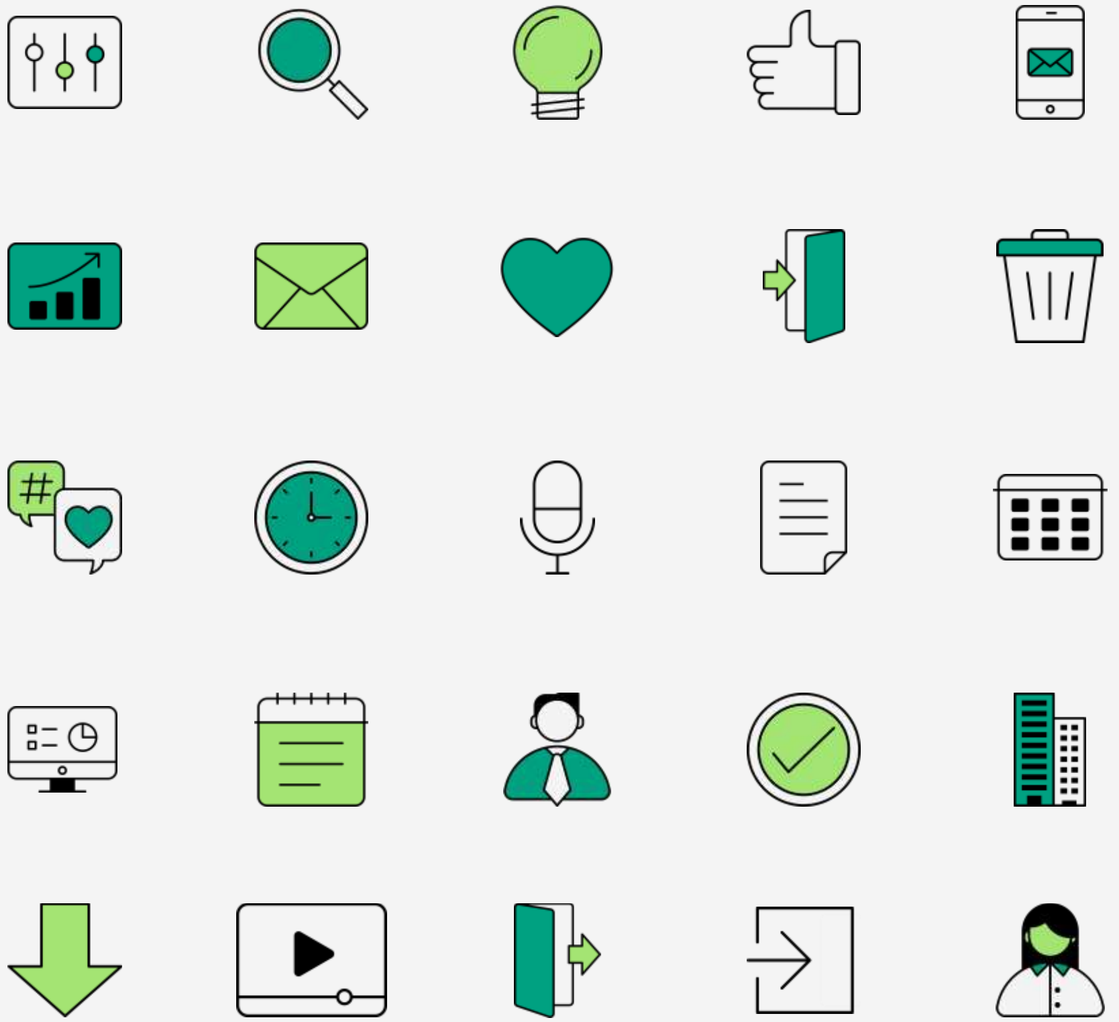

Github LINK: [Placements data analysis](#).