



Building Effective Public Health Awareness Campaigns

Learn how to create impactful public health awareness campaigns by leveraging IBM Cognos for visualizations and advanced data analysis with Python.

Continue Building the Analysis

1

Create Visualizations

Utilize IBM Cognos to transform raw data into insightful visualizations that showcase campaign performance.

2

Integrate Code

Enhance your analysis by integrating Python to perform advanced data analysis and generate valuable insights.

3

Enhance Campaign Analysis

With IBM Cognos and Python, take your analysis to the next level by calculating engagement rates and conducting demographic analysis.

Creating Visualizations



Creating visualizations involves the process of representing data or information in a visual format, such as charts, graphs, diagrams, maps, or other graphical representations. Visualizations are powerful tools for conveying complex information in a way that is easy to understand and interpret.

The main purpose of creating visualizations is to effectively communicate complex data, information, or patterns in a visual format, making it easier for people to understand, interpret, and derive insights from the data.

Integrate Code

Integrating code is a crucial process in software development, which involves combining individual pieces of code or software components to create a unified, functional, and coherent system. This integration process is an essential part of the software development life cycle and is often more complex than merely writing code in isolation.

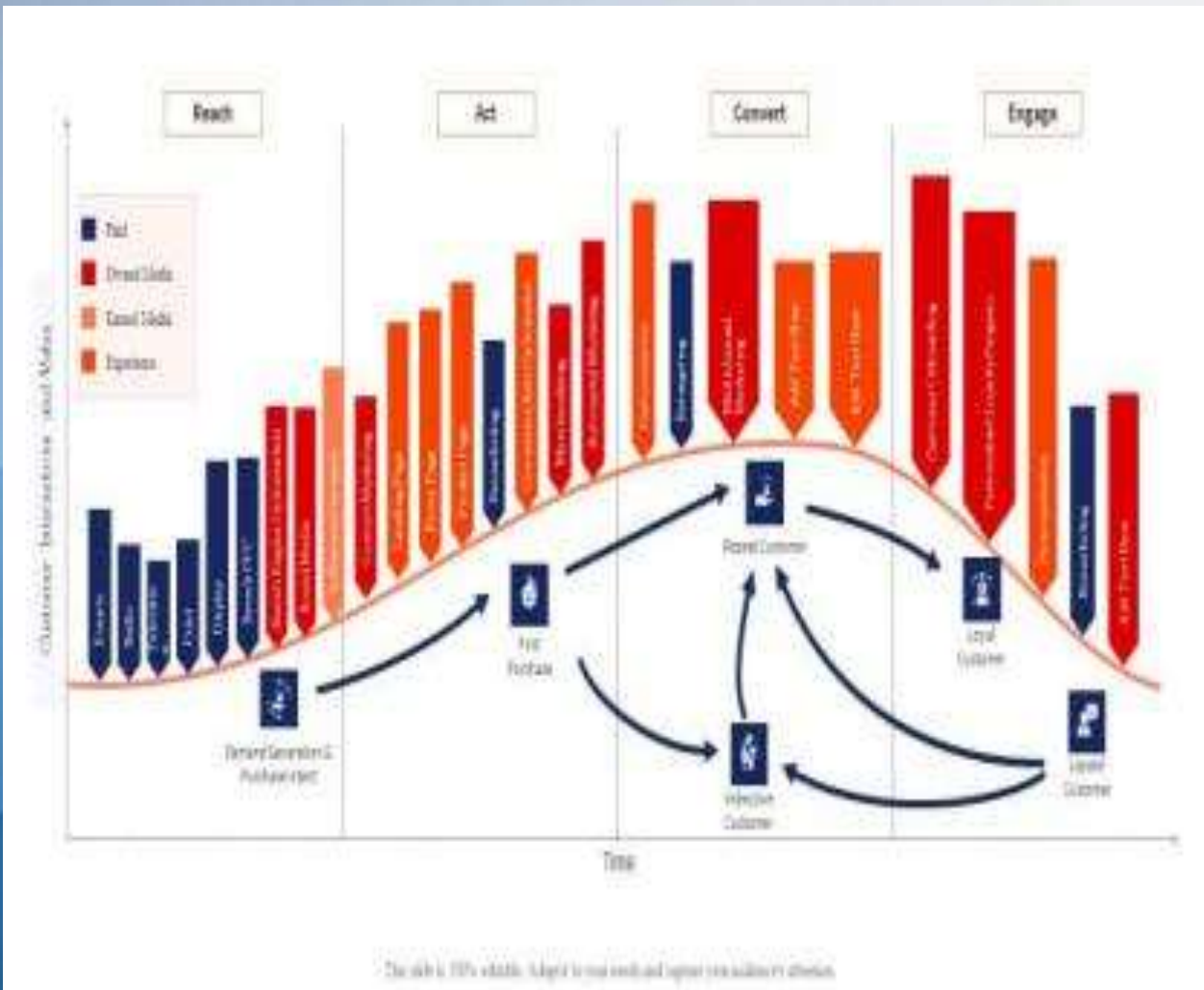
Integrating code is the process of merging separate and potentially disparate pieces of code, developed by different team members or from various sources, into a single, functioning software system.



Enhance Campaign Analysis

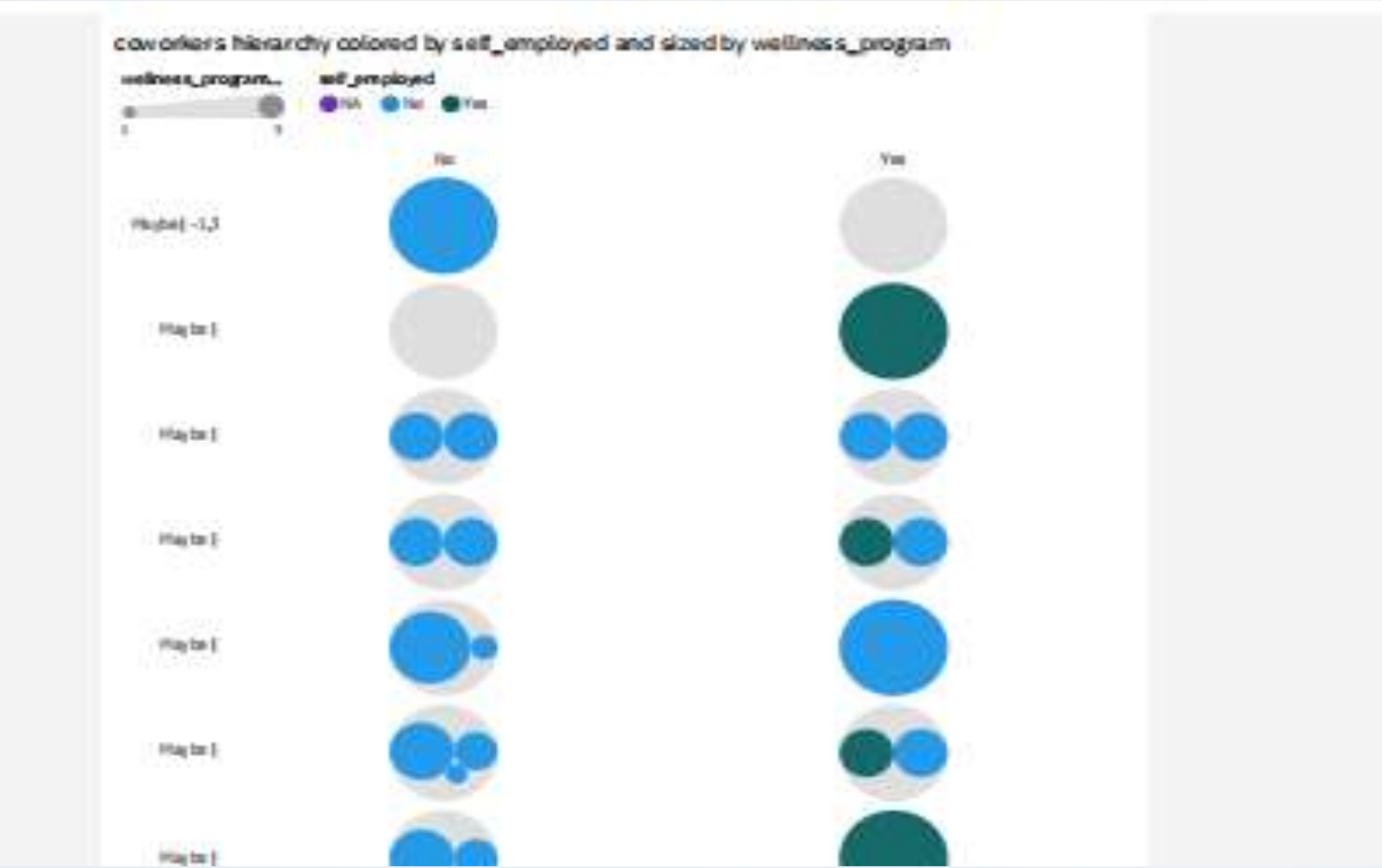
Enhancing campaign analysis is a critical aspect of marketing and advertising strategies in the modern business landscape. It involves a comprehensive and in-depth evaluation of marketing campaigns to optimize their performance, maximize return on investment (ROI), and drive more effective decision-making.

Campaign analysis is the process of assessing the effectiveness and efficiency of marketing campaigns, which can include various promotional activities, advertising efforts, or communication initiatives undertaken by organizations to achieve specific objectives. Enhancing campaign analysis entails refining this process to extract more valuable insights and improve outcomes.

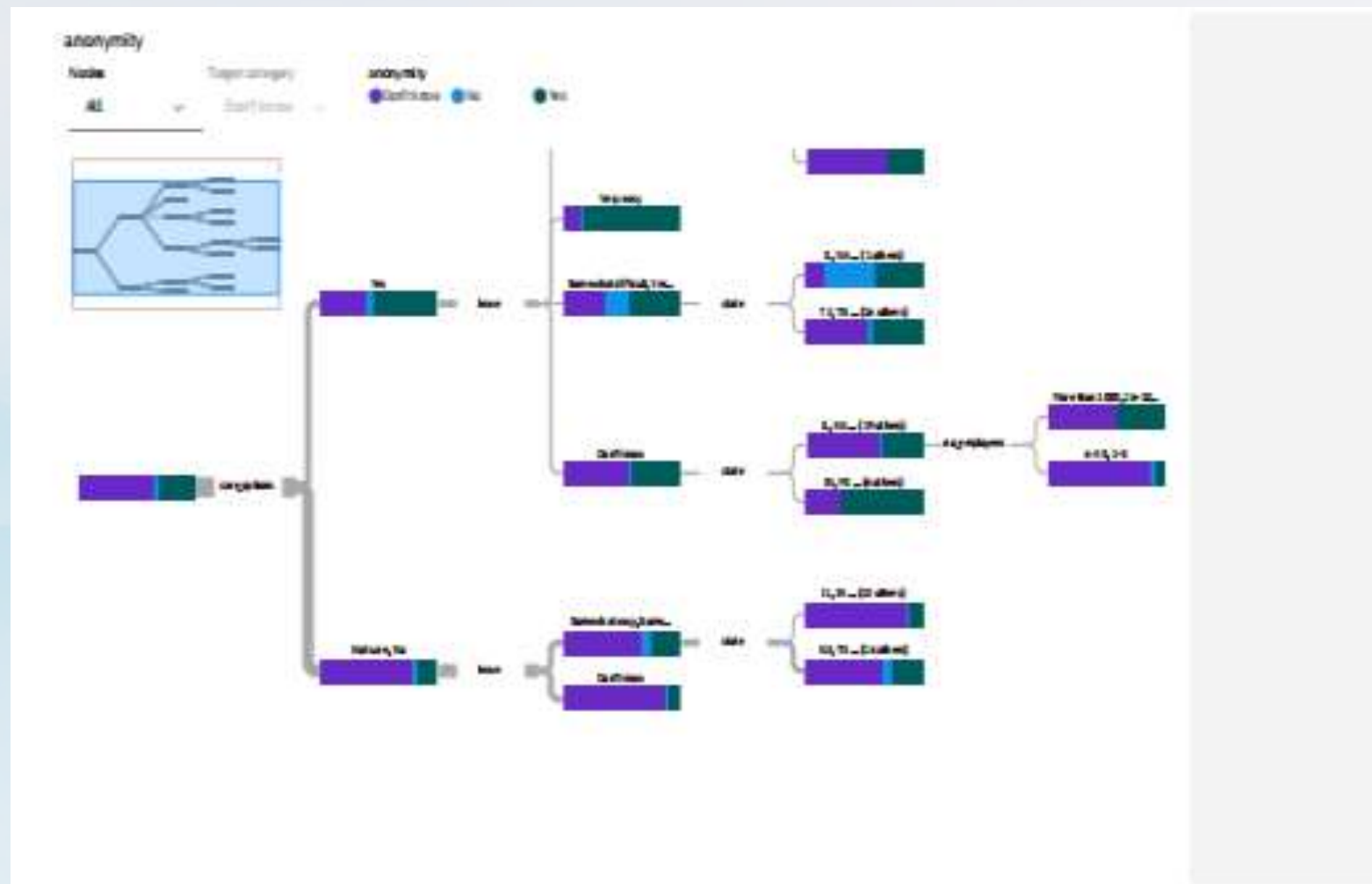


Data Visualization With IBM Cognos

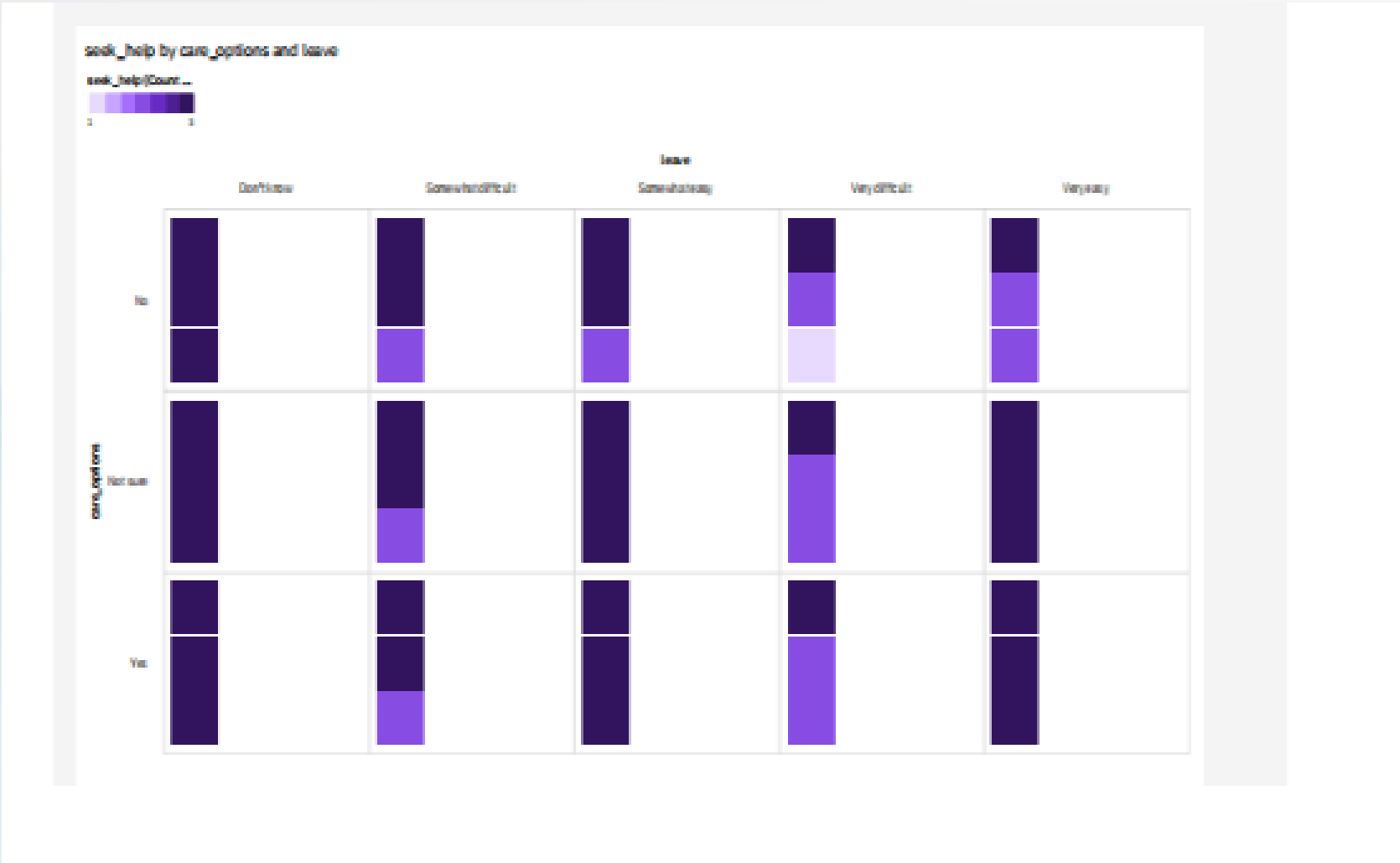
Co-Workers Hierarchy colored by Self_employed and Sized by Wellness_program



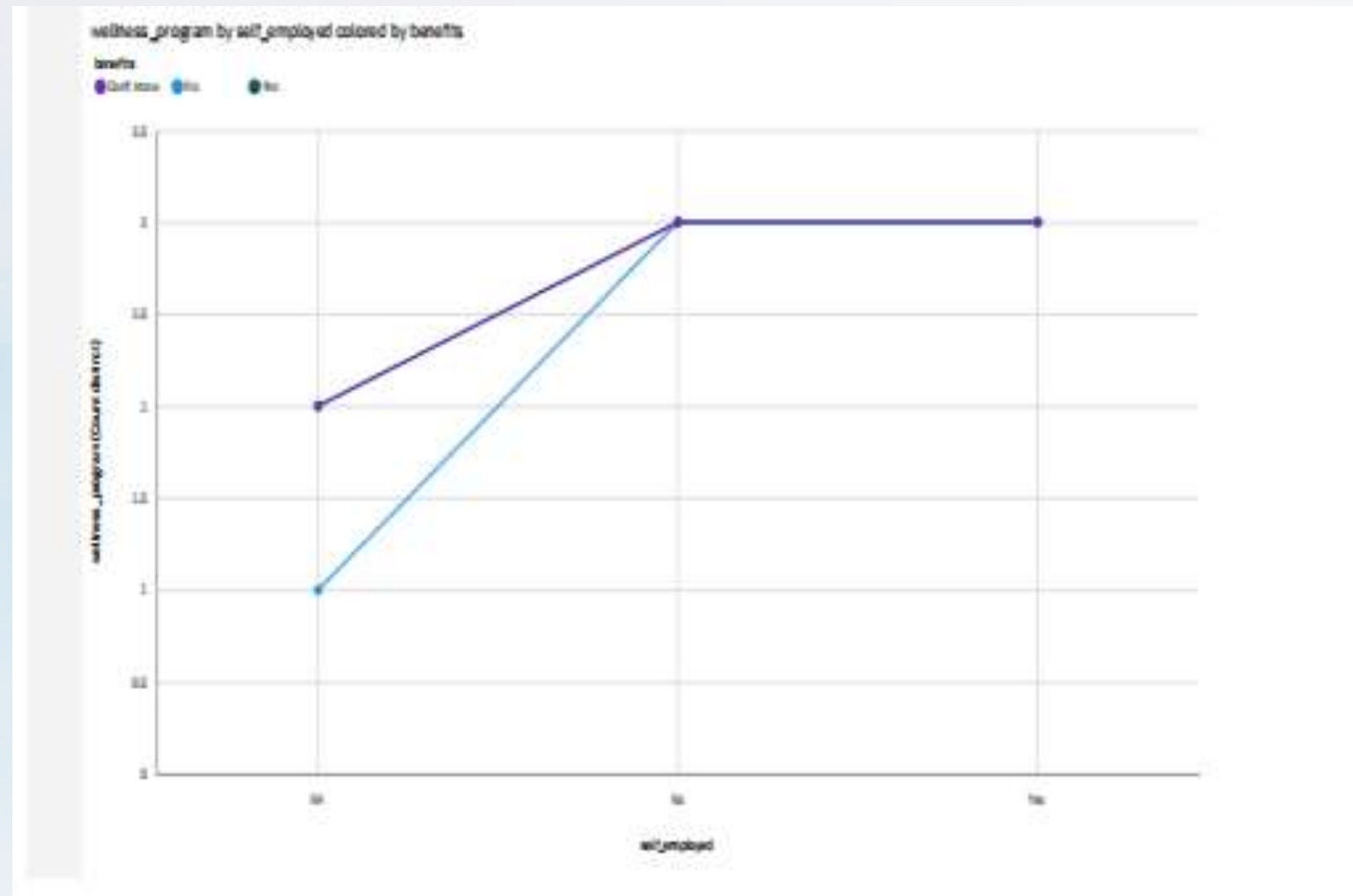
Anonymity



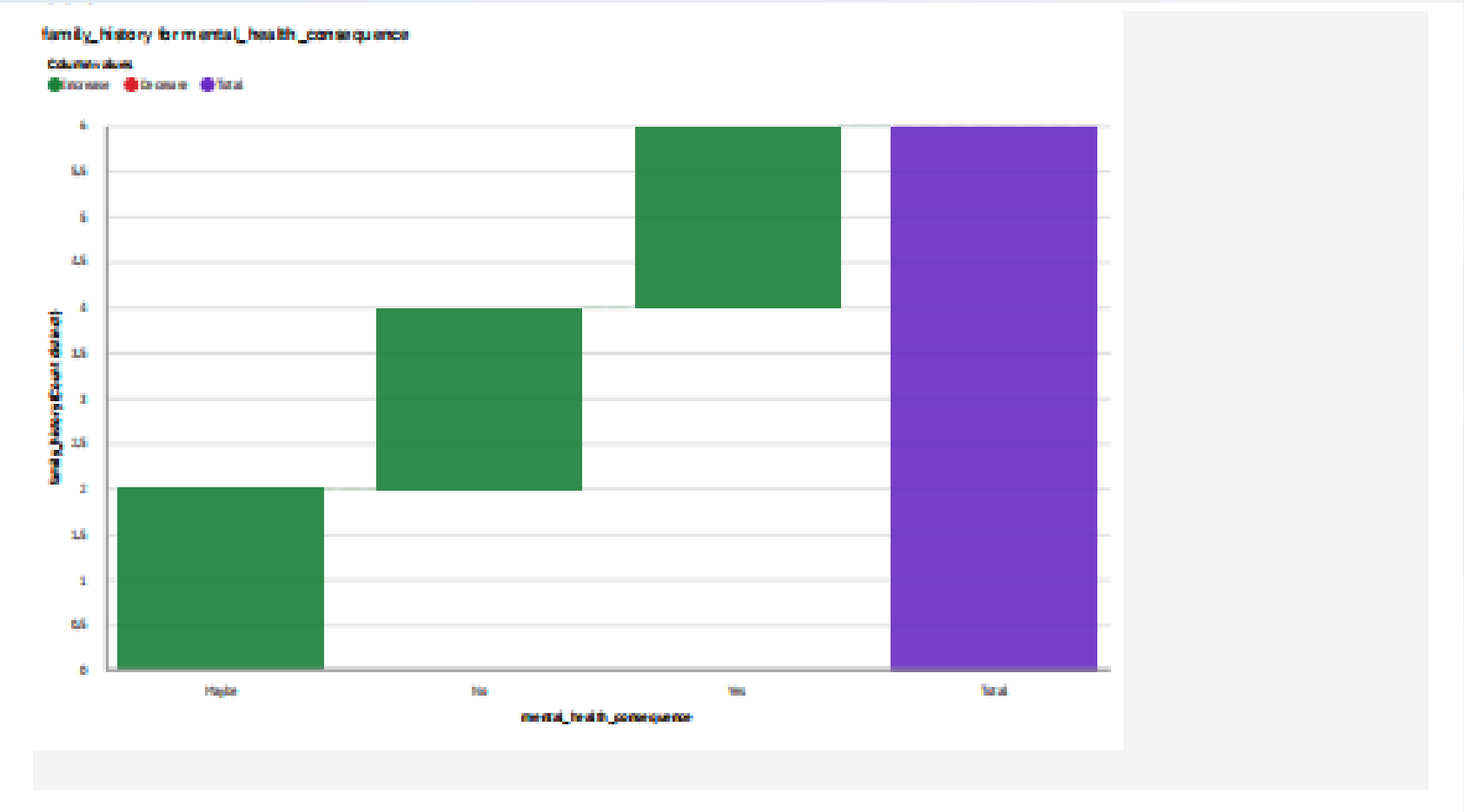
Seek help by care options and leave



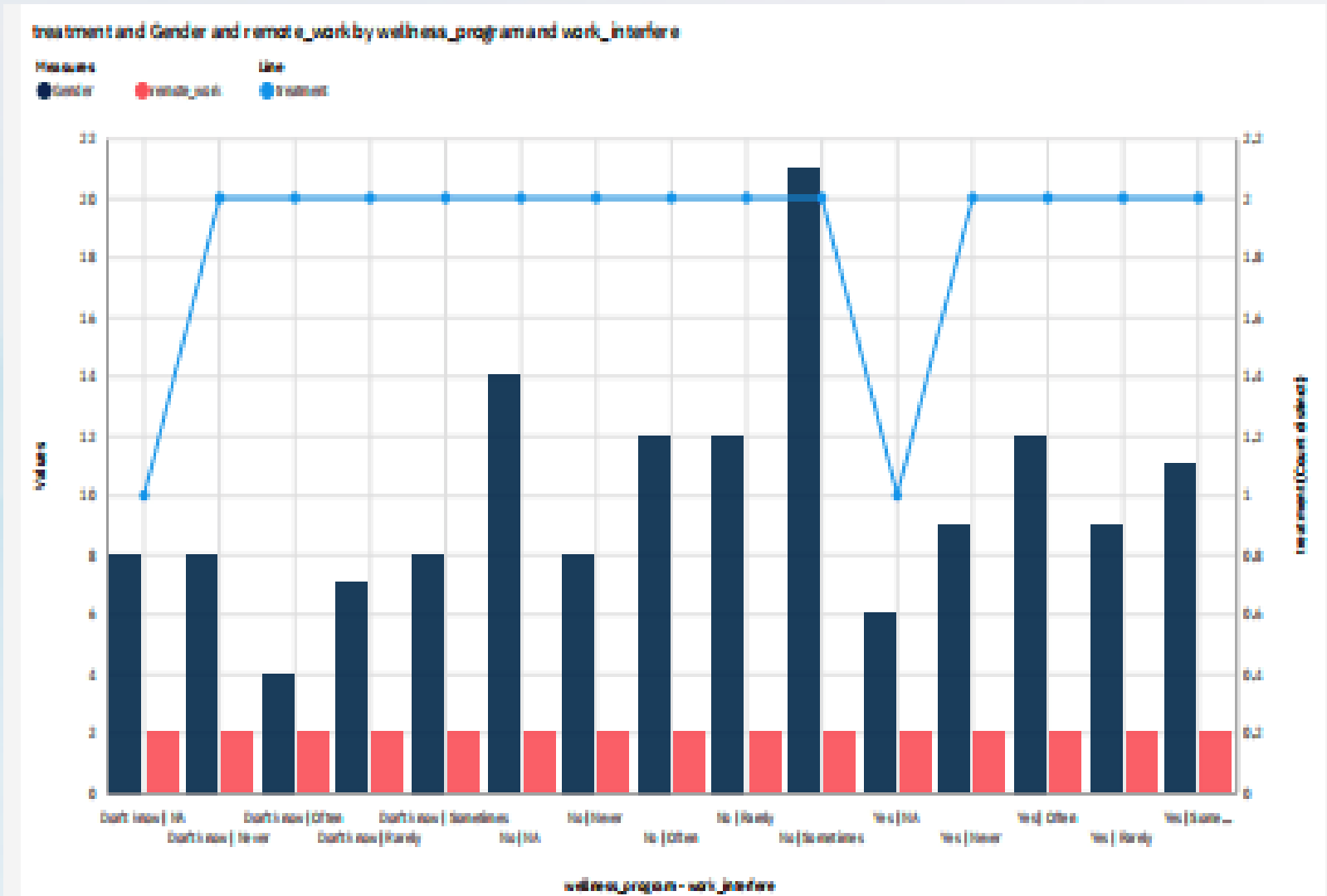
Wellness program by Self employed colored by benefits



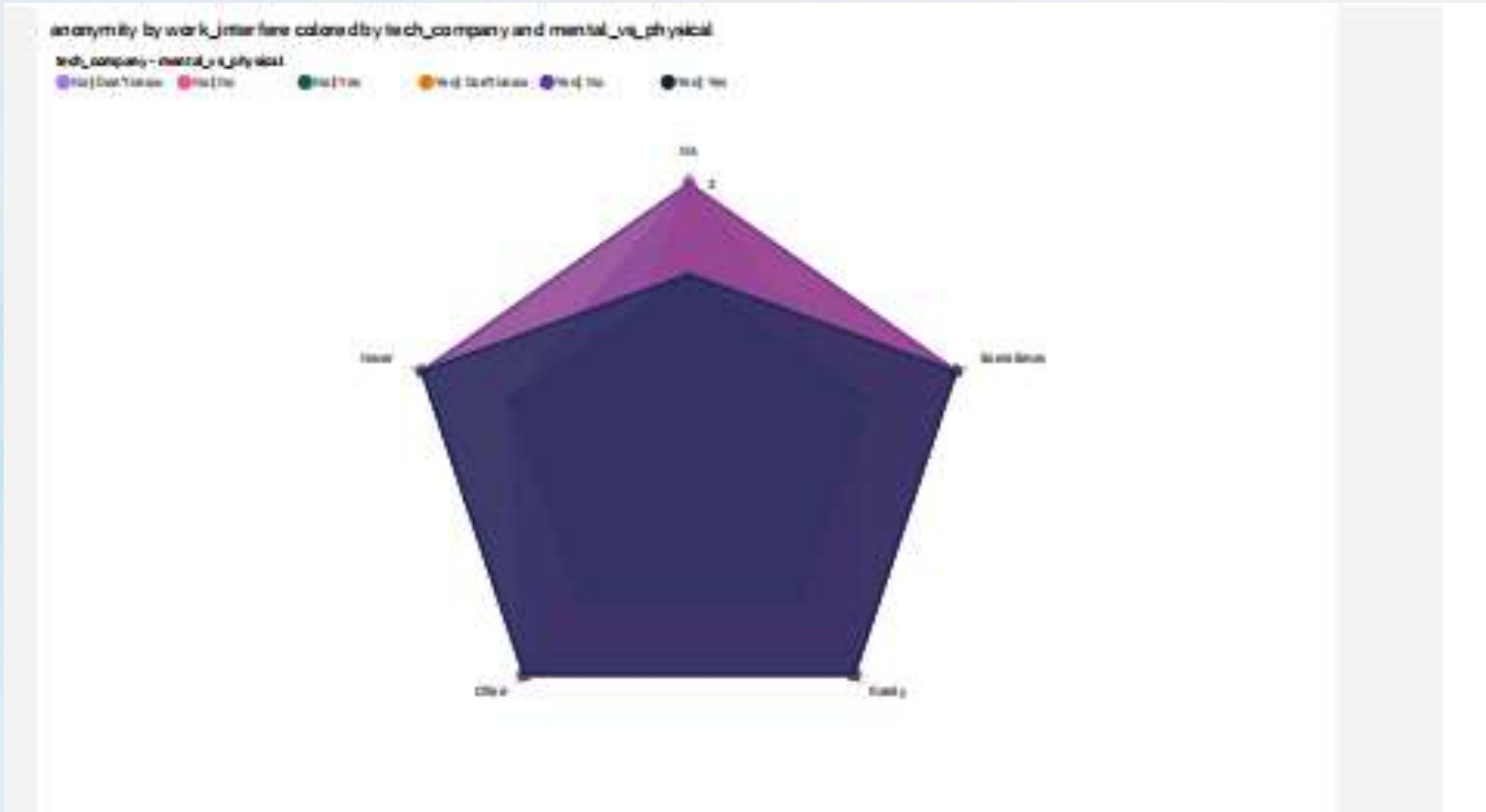
Family History for Mental health consequence



Treatment and Gender and remote work by wellness program and work interfere



Anonymity by work interfere offered by Tech company and Mental vs Physical consequence



Design Engaging Dashboards and Reports

Visualize Campaign Reach

Design dynamic dashboards that provide a comprehensive view of your public health campaign's reach and audience engagement.

Elevate Awareness Levels

Create impactful reports that capture the effectiveness of your awareness initiatives and drive increased awareness among the target audience.

Measure Impact Metrics

Track key impact metrics through visually compelling dashboards that empower stakeholders to make data-driven decisions.



Visualize Campaign Reach



"Visualize Campaign Reach" refers to the process of representing and understanding the extent and impact of a marketing or advertising campaign by creating visualizations that convey information about the reach, audience engagement, and effectiveness of the campaign.

Elevate Awareness Levels

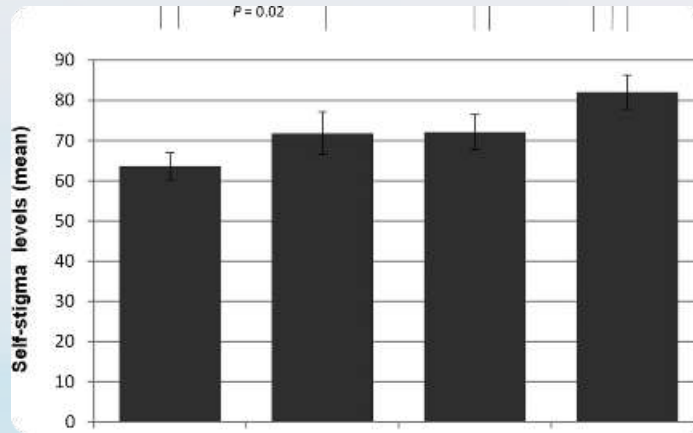
Increasing health awareness levels in campaigns is vital for promoting public health initiatives and encouraging positive behavior change.

To enhance the effectiveness of such campaigns, several strategies can be employed:

- ☐ **Clear and Compelling Messaging**
- ☐ **Visual Storytelling**
- ☐ **Leverage Social Media and Online Platforms**
- ☐ **Educational Campaigns**
- ☐ **Collaborate with Influencers and Experts**
- ☐ **Community Involvement**
- ☐ **Behavioral Science Insights**
- ☐ **Tailored Messaging**
- ☐ **Call to Action**
- ☐ **Utilize Health Screenings and Health Fairs**
- ☐ **Evaluation and Feedback**



Insights from Public Health Awareness Campaigns



Behavioral Patterns

Uncover behavioral patterns and trends among campaign participants to inform future strategies.



Success Stories

Share impactful success stories from previous campaigns to demonstrate the effectiveness of public health awareness initiatives.



Real-world Impact

Highlight tangible outcomes and improvements directly attributed to public health awareness campaigns.

Unlock the Power of Advanced Data Analysis

1 Calculate Engagement Rates

Employ Python to calculate engagement rates, providing insights into the effectiveness of your public health campaigns.

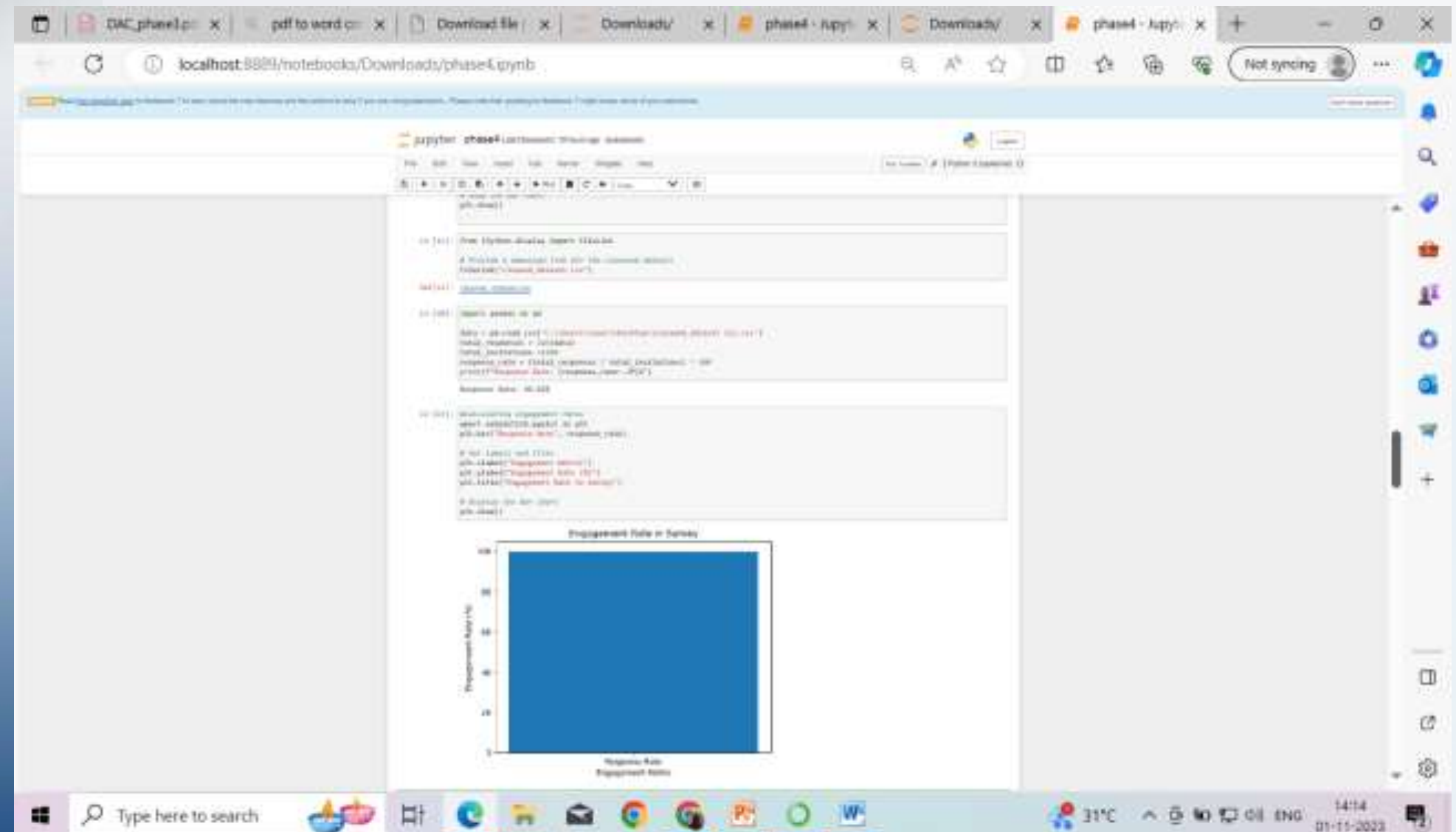
2 Conduct Demographic Analysis

Leverage code to perform demographic analysis, allowing for targeted interventions and personalized strategies.

3 Run Statistical Tests

Harness the capabilities of Python to conduct statistical tests and validate the impact of your public health awareness campaigns.

Calculating Engagement Rates



Conducting Demographic Analysis

```
jupyter phase4 Last Checkpoint: 18 hours ago (autosaved)
File Edit View Insert Cell Format Widgets Help
Python 3 (ipykernel)

In [10]: import pandas as pd

# Load your dataset
data = pd.read_csv('E:\\Users\\user\\Desktop\\cleaned_dataset (1).csv')

# Examine the dataset
print(data.head()) # view the first few rows
print(data.info()) # Get information about the data types and missing values
# Filter the dataset for insights based on 'Age' and 'Gender'
filtered_data = data[['Age', 'Gender']]
# Summary statistics for 'Age'
age_stats = filtered_data['Age'].describe()

# Summary statistics for 'Gender'
gender_stats = filtered_data['Gender'].value_counts()

Age Gender Country self_employed family_history treatment \
0 37 Female United States No No Yes
1 44 Male United States No No No
2 42 Male Canada No No No
3 31 Male United Kingdom No Yes Yes
4 31 Male United States No No No

work_interfere no_employees remote_work tech_company ... anxiety \
0 Often 5-25 No Yes ... Yes
1 Rarely More than 10000 No No ... Don't know
2 Rarely 5-25 No Yes ... Don't know
3 Often 25-990 No Yes ... No
4 Never 100-500 Yes Yes ... Don't know

leave mental_health_consequence phys_health_consequence \
0 Somewhat easy No No
1 Don't know Maybe No
2 Somewhat difficult No No
3 Somewhat difficult Yes Yes
4 Don't know No No

coworkers supervisor mental_health_interview phys_health_interview \
0 Some of them Yes No Maybe
1 No No No
2 Yes Yes Yes
3 Some of them No Maybe Maybe
```

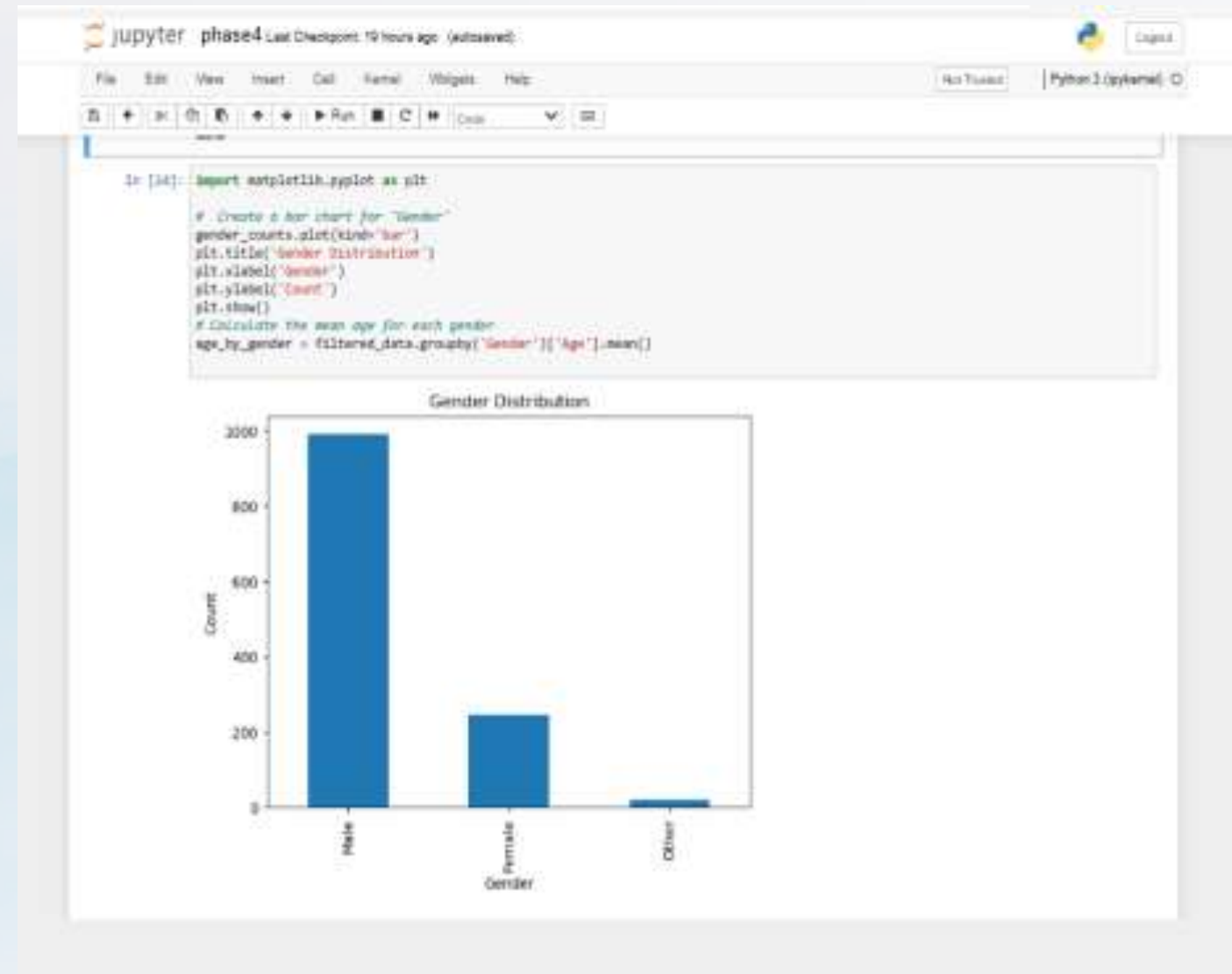
```
jupyter phase4 Last Checkpoint: 18 hours ago (autosaved)
File Edit View Insert Cell Format Widgets Help
Python 3 (ipykernel)

4 Some of them Yes Yes Yes

mental_vs_physical_vs_consequence
0 Yes No
1 Don't know No
2 No No
3 No Yes
4 Don't know No

[5 rows x 24 columns]
<class 'pandas.core.frame.DataFrame'>
RangeIndex: 1259 entries, 0 to 1258
Data columns (total 24 columns):
 #   Column                Non-Null Count  Dtype
---  --
 0   Age                   1259 non-null  int64
 1   Gender                1259 non-null  object
 2   Country               1259 non-null  object
 3   self_employed         1259 non-null  object
 4   family_history         1259 non-null  object
 5   treatment             1259 non-null  object
 6   work_interfere        1259 non-null  object
 7   no_employees          1259 non-null  object
 8   remote_work           1259 non-null  object
 9   tech_company          1259 non-null  object
10   benefits              1259 non-null  object
11   care_options          1259 non-null  object
12   wellness_program      1259 non-null  object
13   seek_help             1259 non-null  object
14   anxiety              1259 non-null  object
15   leave                1259 non-null  object
16   mental_health_consequence 1259 non-null  object
17   phys_health_consequence 1259 non-null  object
18   coworkers             1259 non-null  object
19   supervisor            1259 non-null  object
20   mental_health_interview 1259 non-null  object
21   phys_health_interview  1259 non-null  object
22   mental_vs_physical     1259 non-null  object
23   vs_consequence        1259 non-null  object
dtypes: int64(1), object(13)
memory usage: 136.3+ KB
None
```

Conducting Demographic Analysis



Running Statistical Tests

```
jupyter phase4 Last Checkpoint: 19 hours ago (autosaved)

File Edit View Insert Cell Kernel Widgets Help Not Trusted Python 3 (pykernel)

In [4]: #performing chi-squared test
import pandas as pd
from scipy.stats import chi2_contingency

# Create a contingency table (cross-tabulation) of two categorical variables
contingency_table = pd.crosstab(data['gender'], data['mental_health_consequence'])

# Perform the chi-squared test
chi2, p, _, _ = chi2_contingency(contingency_table)

# Display the test statistic and p-value
print(f"Chi-squared statistic: {chi2:.2f}")
print(f"P-value: {p:.2e}")

# Determine statistical significance
alpha = 0.05 # set your significance level
if p < alpha:
    print("There is a significant association between Gender and Mental Health Consequence.")
else:
    print("There is no significant association between Gender and Mental Health Consequence.")

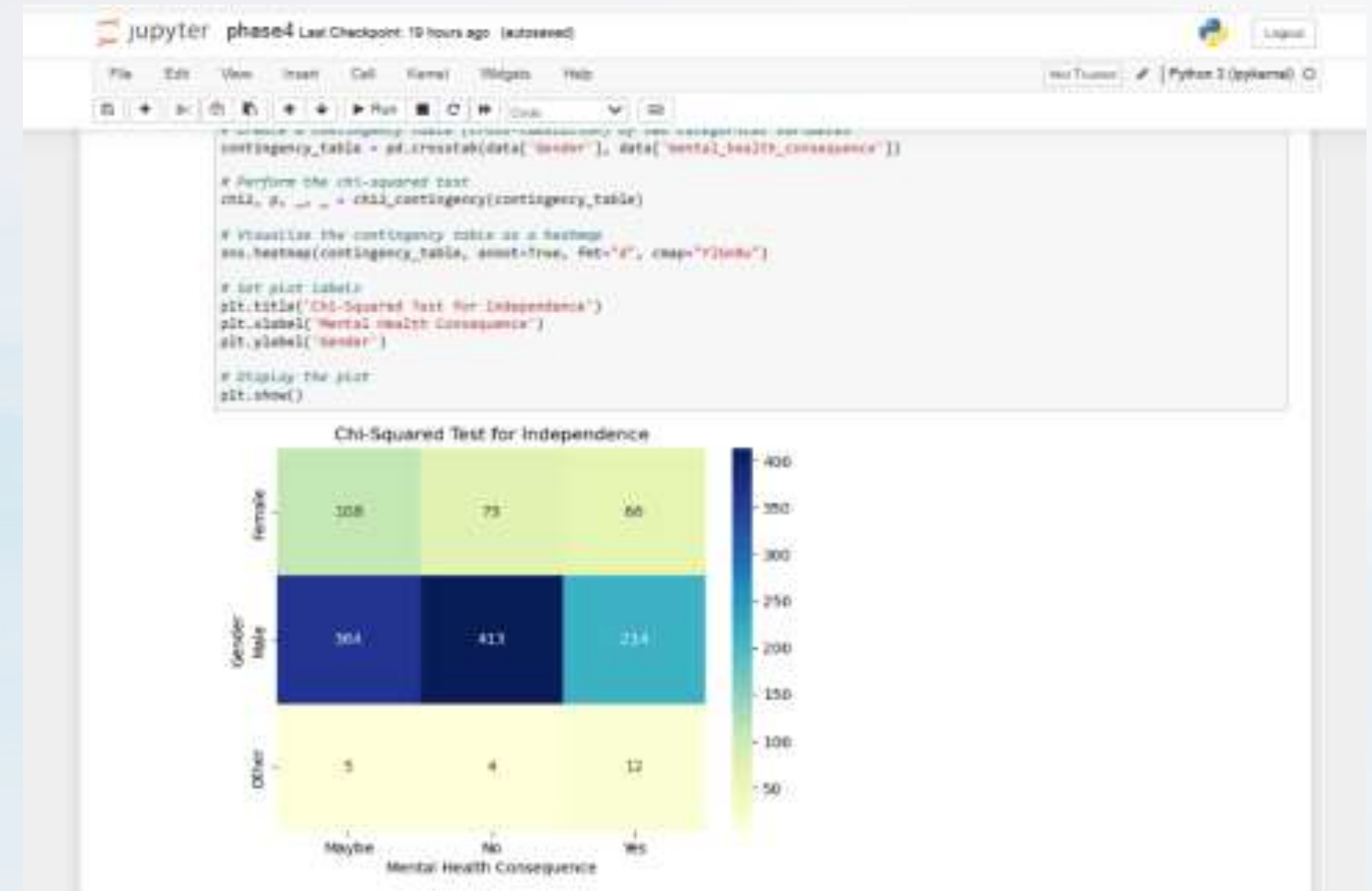
Chi-squared statistic: 26.15
P-value: 1.35e-05
There is a significant association between Gender and Mental Health Consequence.

In [4]: #visualizing chi-squared test
import seaborn as sns
from scipy.stats import chi2_contingency

# Create a contingency table (cross-tabulation) of two categorical variables
contingency_table = pd.crosstab(data['gender'], data['mental_health_consequence'])

# Perform the chi-squared test
chi2, p, _, _ = chi2_contingency(contingency_table)

# Visualize the contingency table as a heatmap
sns.heatmap(contingency_table, annot=True, fmt="d", cmap="YlGnBu")
```



Manifestation of Effective Public Health Campaigns



Captivating Visuals

Create visually compelling campaign materials to attract and engage your target audience effectively.



Collaborative Efforts

Showcase successful collaborations with key stakeholders that have amplified the impact of public health campaigns.



Community Empowerment

Highlight how your campaigns have empowered communities, fostering behavioral change and healthier lifestyles.

Success Rate of Public Health Awareness Campaigns

1

Measuring Success

Define clear metrics to gauge the success of your public health awareness campaigns based on predetermined objectives.

2

Analyzing Impact

Evaluate the impact of your campaigns by analyzing key indicators, such as behavior change and healthcare utilization.

3

Celebrating Achievements

Share success stories and positive outcomes resulting from your impactful public health awareness initiatives.

Results: Insights from Public Health Awareness Analysis

1 Targeted Interventions

Identify specific sub-populations that require targeted interventions for maximum impact and improved health outcomes.

2 Data-Driven Strategies

Formulate evidence-based strategies by leveraging insights from robust data analysis, ensuring effective resource allocation.

3 Continuous Refinement

Iteratively refine public health campaigns based on data insights, creating more impactful and successful initiatives.

Conclusion: Unleash the Power of Data for Health Impact

Harness the potential of IBM Cognos and Python to drive data-powered public health awareness campaigns that create lasting impact and improve health outcomes.

