



**Logistic Regression:** Accuracy improved from 0.3 to 0.4 after applying SMOTE.

- Confusion Matrix: 722 accurate "Burnout" predictions.
- Key Coefficients:
  - Positive: Job Roles (Sales, Software Engineer), Industry (IT, Retail), Mental Health Resources ("Yes"), Region (Asia).
  - Negative: Job Role (Designer), Industry (Healthcare), Sleep Quality (Poor), Stress Level (Medium).

**SVM:** Accuracy of 0.5.

- Confusion Matrix: High accuracy for office work, moderate for remote work, poor for hybrid. Hybrid mode is hard to predict.

**Questionnaire Results:**

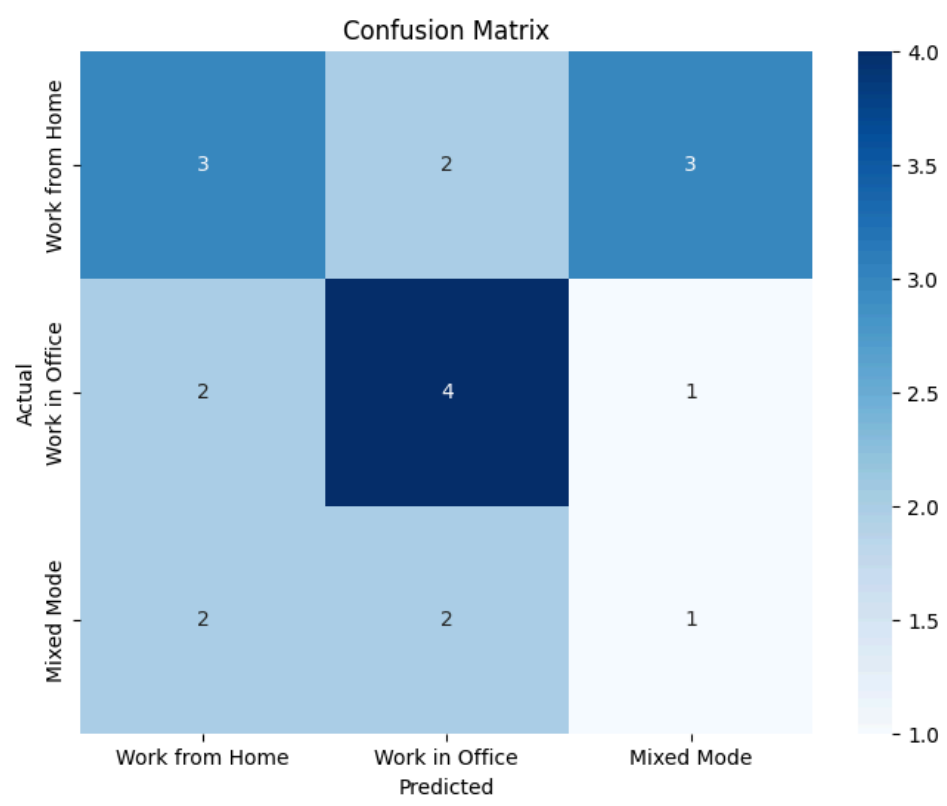
- **Work from Home Experience:** 40% Yes, 60% No.
- **Work From Home Increases Productivity:** 70% Yes, 30% No.
- **Work From Home Prevents Going Out:** 70% Yes, 30% No.
- **Work From Home Glves Flexibility:** 100% Yes.
- **Work From Home Saves Time:** 40% Yes, 60% No.
- **Causes Mental Disorders:** 30% Office, 70% Remote.
- **Work From Home Reduces Social Interaction:** 70% Yes, 30% No.
- **Focus:** 60% Office, 40% Remote.
- **Preference:** 50% Hybrid, 30% Office, 20% Remote.

**Hypotheses from Logistic Regression:**

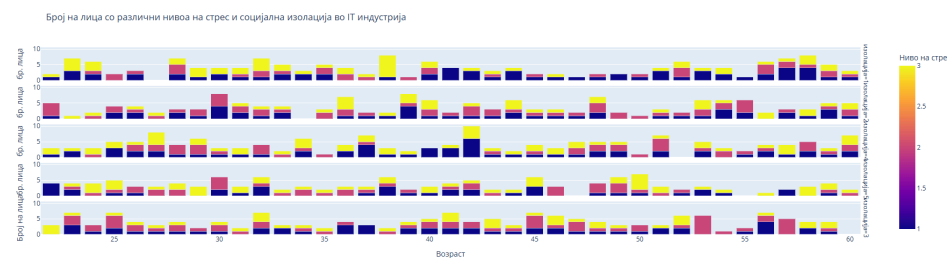
- High job satisfaction reduces mental health issues: True.
- Mental health better onsite: Mixed.
- Mental health better remote: False.
- Stress and isolation increase mental health issues: True.

# Visualizations from experiments:

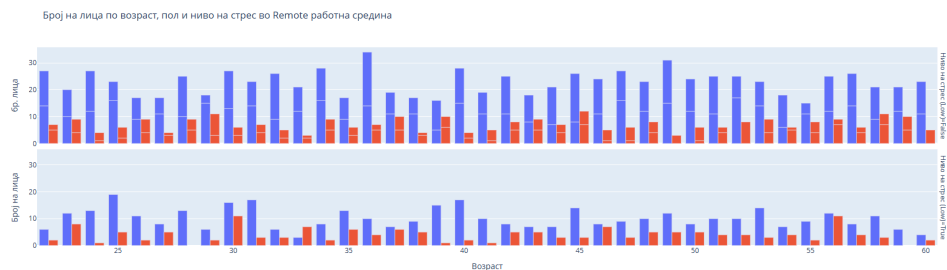
Graph	Meaning																																																																																		
<div><p>Confusion Matrix</p><table><tr><th></th><th>Anxiety</th><th>Burnout</th><th>Depression</th></tr><tr><th>Anxiety</th><td>0</td><td>393</td><td>3</td></tr><tr><th>Burnout</th><td>0</td><td>722</td><td>1</td></tr><tr><th>Depression</th><td>0</td><td>379</td><td>2</td></tr></table></div>		Anxiety	Burnout	Depression	Anxiety	0	393	3	Burnout	0	722	1	Depression	0	379	2	<p>Logistic Regression Confusion Matrix - It tells which value can be predicted the most accurately, in this result the most accurate prediction from the dataset is for `Burnout` which has a coefficient of 722 (very high).</p>																																																																		
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SVM Machine - Shows that by using the SVM machine method we can predict work in office most succesfully



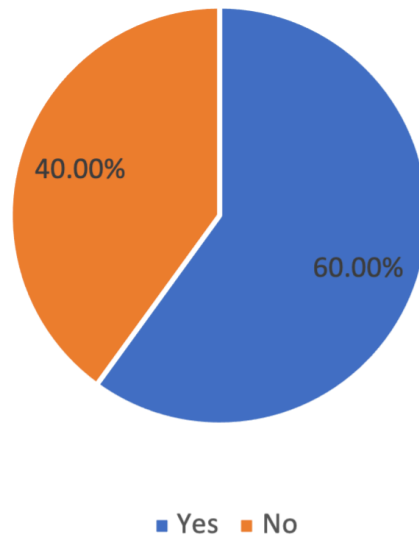
Main Dataset Visualization - Number of people with levels of stress and social isolation within the IT industry



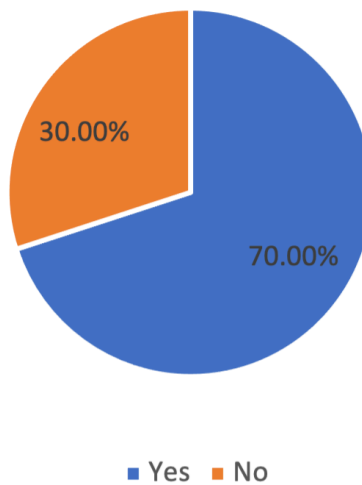
Main Dataset Visualization - Number of people with levels of stress, age and gender which work remotly

# Questionnaire Visualizations Answers:

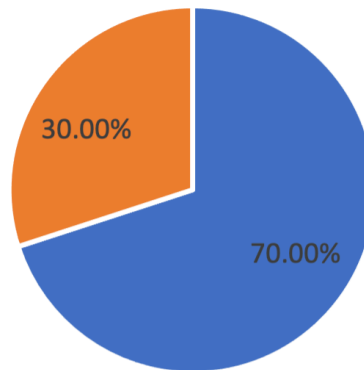
Have you ever experienced working from home?



Do you think that working from home increases your work productivity?

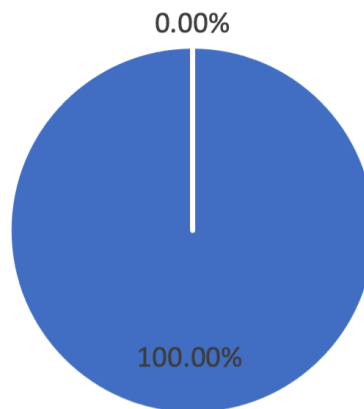


Do you think that working from home prevents you from going out?



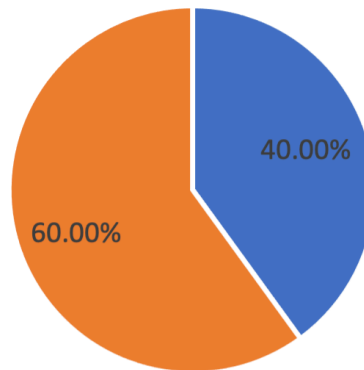
■ Yes ■ No

Do you think that working from home gives you more flexibility?



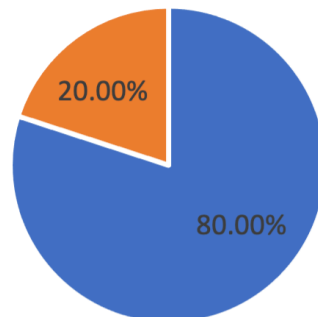
■ Yes ■ No

Do you think that working from home saves you more time?



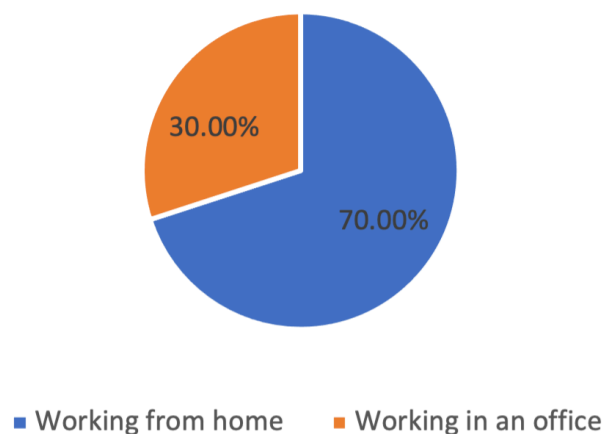
■ Yes ■ No

Which work type has the potential to cause you physical problems, such as the neck, back, and leg pain?

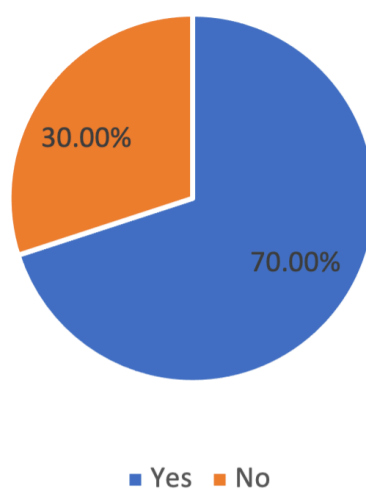


■ Working from home ■ Working in an office

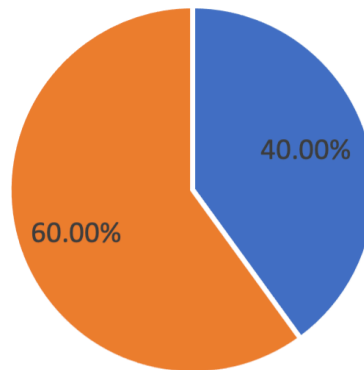
Which work type has the potential to cause mental disorders, such as stress, anxiety, and depression?



Do you think that working from home prevents you from getting in contact with people?

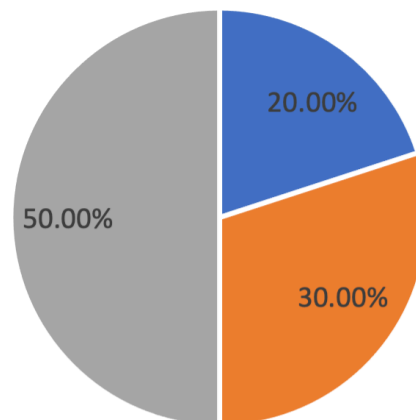


Which work type keeps you focused while working?



■ Working from home ■ Working in an office

Which work type do you prefer the most?



■ Working from home ■ Working in an office ■ A mixed mode of working



# Hypothesis Results:

Answers from the project hypothesis questions:

- High job satisfaction reduces mental health issues
- Mental health better onsite
- Mental health better remote
- Stress and isolation increase mental health issues

