

Tranquilo Anxiety Level Classification

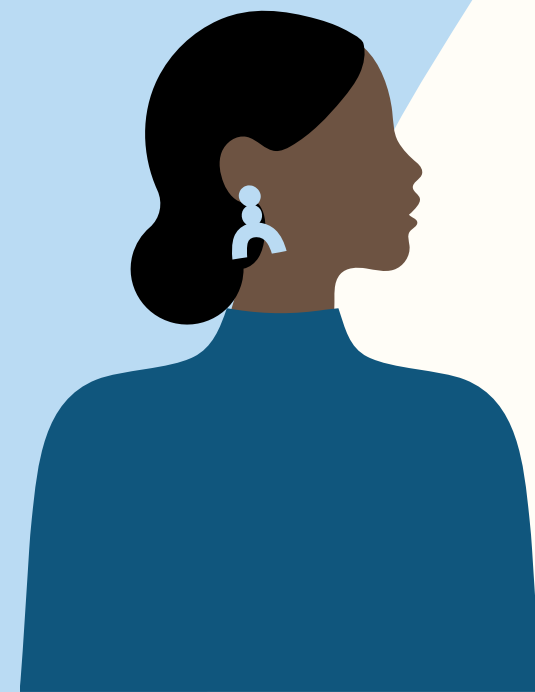


Agenda

- 1 Problem Statement
- 2 Related Work
- 3 Data Exploration
- 4 Data Preprocessing
- 5 ML Model
- 6 Deployment(Mobile App & Website)

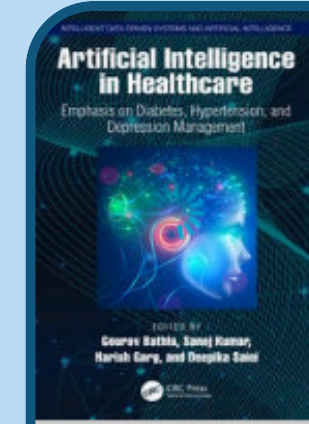


Problem Statement



Anxiety disorders affect millions globally, yet diagnosing and assessing severity is often subjective and inconsistent. There is a need for a reliable, data-driven solution to classify anxiety levels, enabling better intervention and support. This project uses machine learning to predict anxiety severity based on key health indicators.

Related Work



Chapter

Detection of Generalized Anxiety Disorder

By Md Imran Hussain, Shivam, Soumay Gupta, Seema, Syed Rameem Zahra, Yassine Aribi

Book [Artificial Intelligence in Healthcare](#)

Edition	1st Edition
First Published	2024
Imprint	CRC Press
Pages	29
eBook ISBN	9781003522096

- <https://www.taylorfrancis.com/chapters/edit/10.1201/9781003522096-7/detection-generalized-anxiety-disorder-md-imran-hussain-shivam-soumay-gupta-seema-syed-rameem-zahra-yassine-aribi>
- <https://dergipark.org.tr/en/pub/ejosat/article/999914>



Data Exploration

- Dataset has 1566 rows, 17 columns/ features
- There are some little null values
- Most features are Categorical
- We have 17 columns:
- 15 features
- 2 Labels: gad_score & anxiety_severity



Data Exploration

	age	gender	bmi	who_bmi	phq_score	depression_severity	depressiveness	suicidal	depression_diagnosi
0	19	male	33.333333	Class I Obesity	9	Mild	False	False	Fals
1	18	male	19.841270	Normal	8	Mild	False	False	Fals
2	19	male	25.102391	Overweight	8	Mild	False	False	Fals
3	18	female	23.738662	Normal	19	Moderately severe	True	True	Fals
4	18	male	25.617284	Overweight	6	Mild	False	False	Fals
...
1561	24	female	21.096191	Normal	6	Mild	False	False	Fals
1562	22	male	25.308642	Overweight	4	None-minimal	False	False	Fals
1563	22	male	22.720438	Normal	2	None-minimal	False	False	Fals
1564	22	female	23.033168	Normal	17	Moderately severe	True	False	Fals
1565	22	male	22.598140	Normal	6	Mild	False	False	Fals

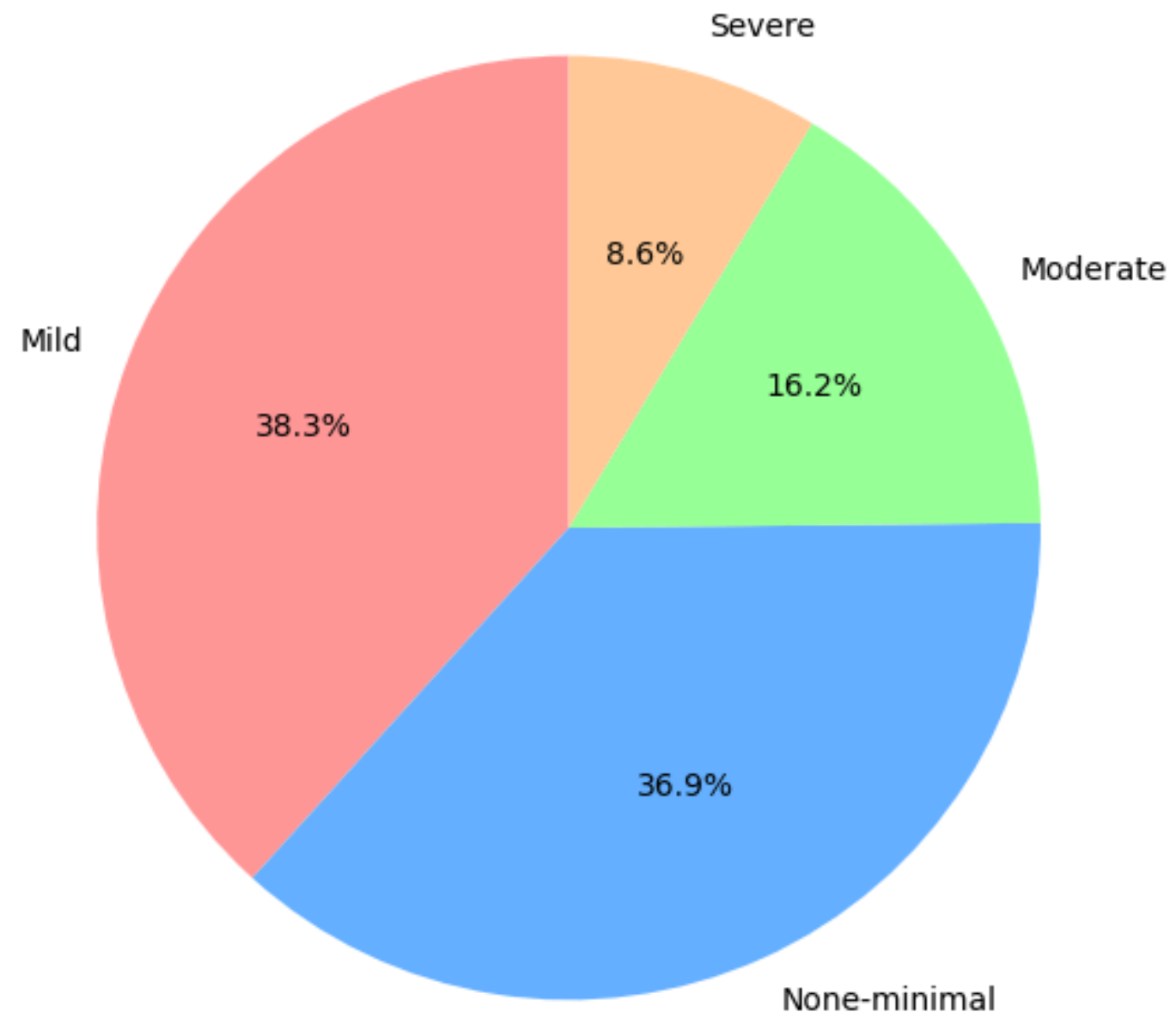
1566 rows × 16 columns

target

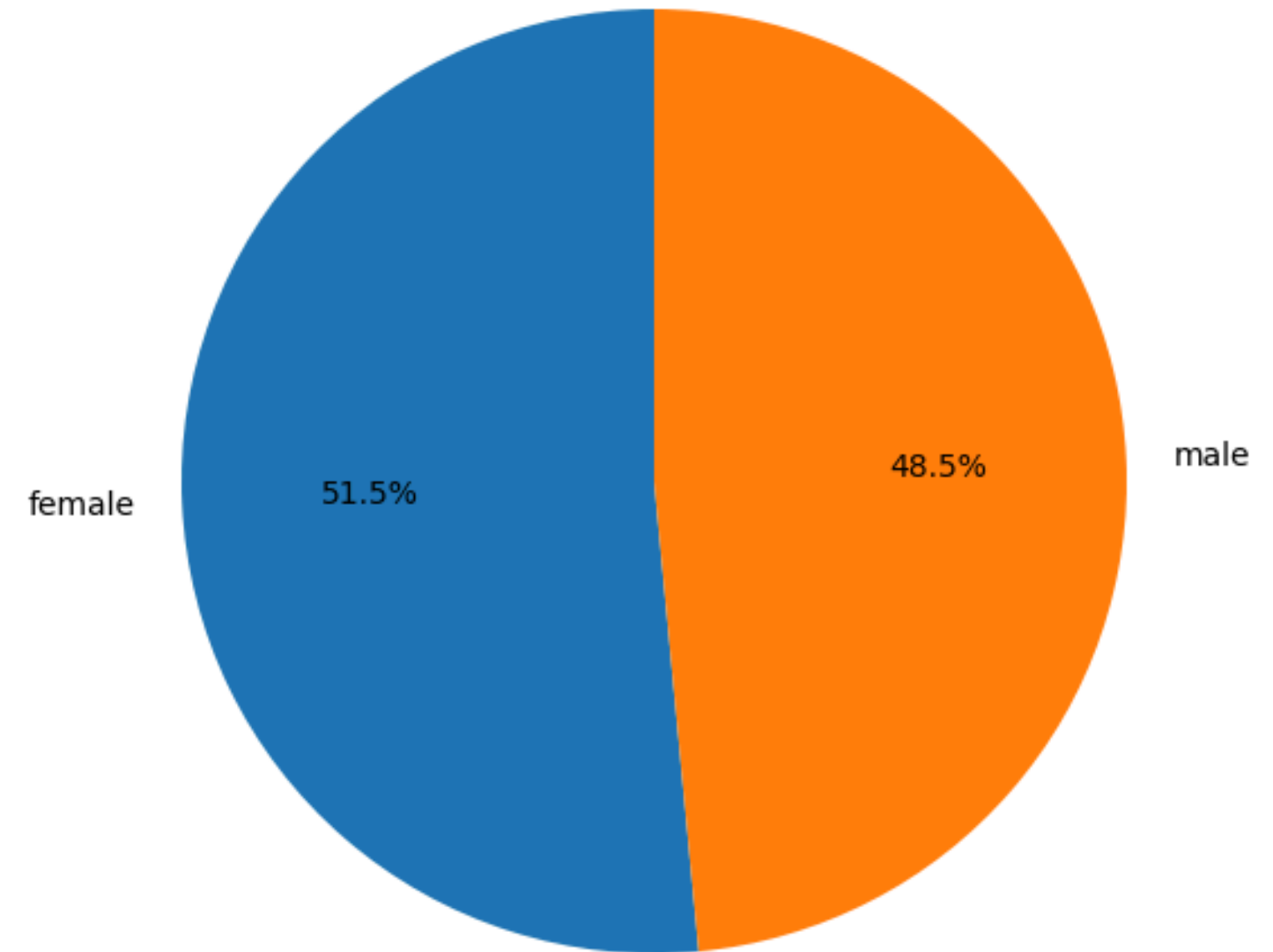
depression_severity
Mild
Mild
Mild
Moderately severe
Mild

Data Exploration

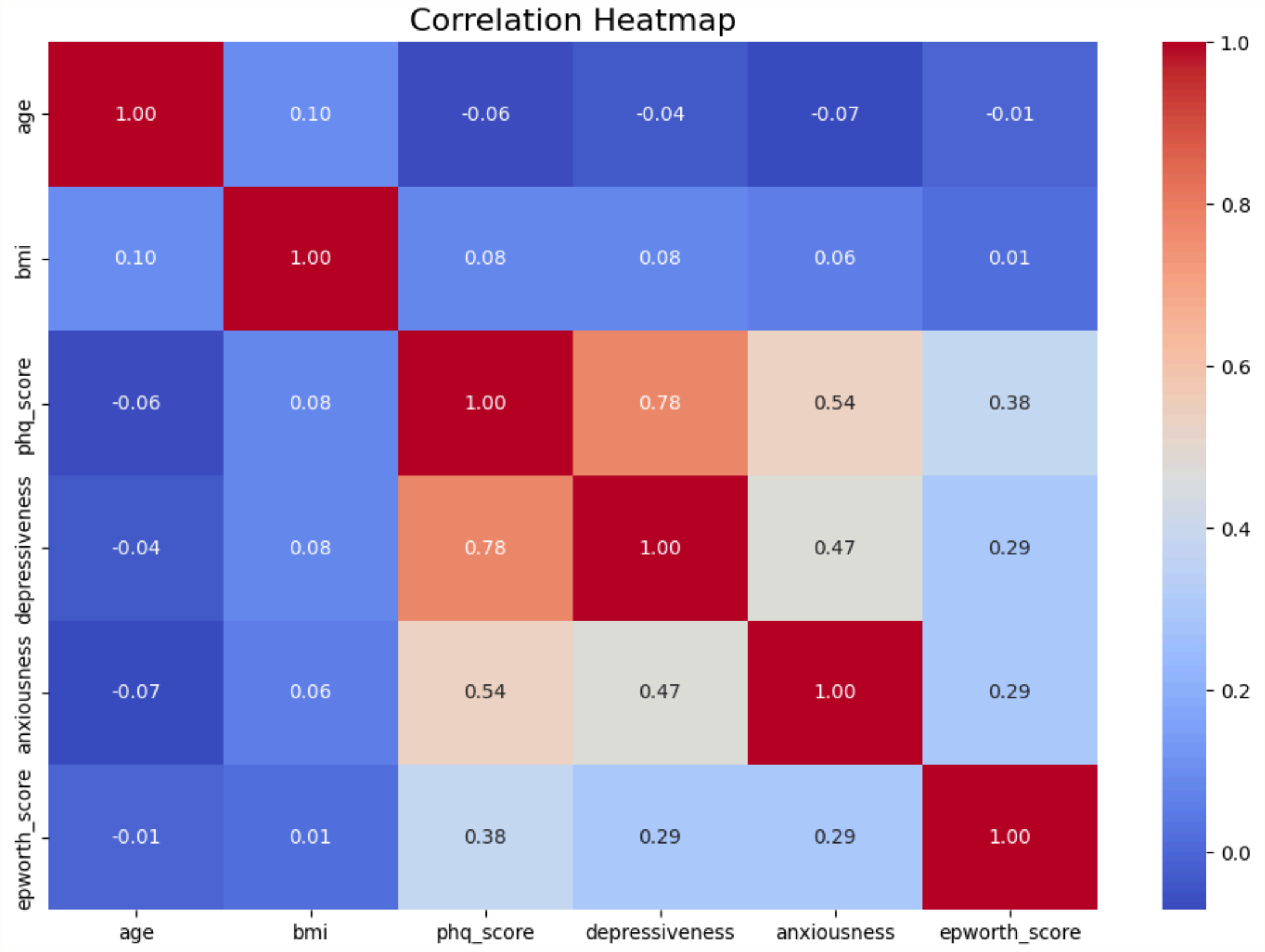
Anxiety Severity Distribution



Gender Distribution



Data preprocessing



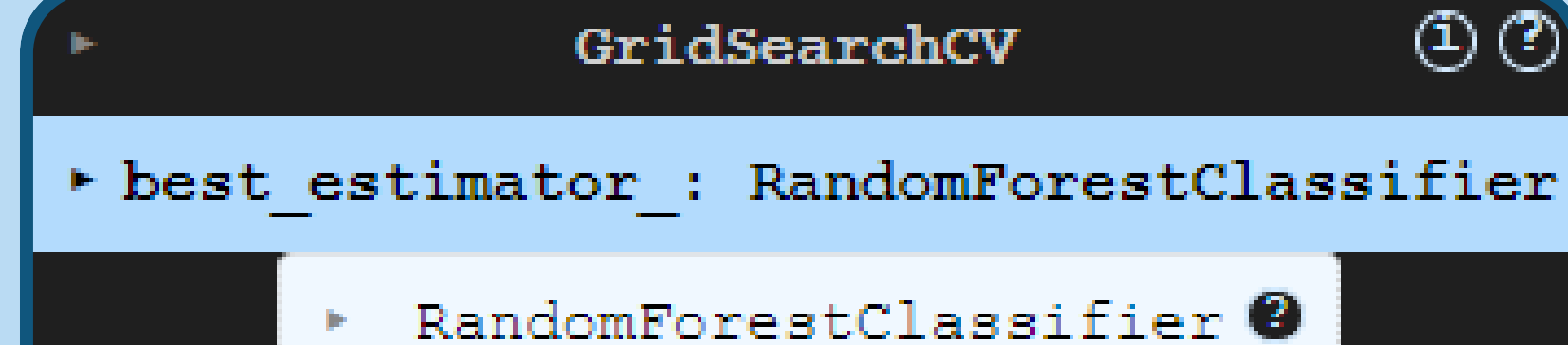
ML Model

[Random Forest Classifier]



RandomForestClassifier

```
RandomForestClassifier(random_state=42)
```

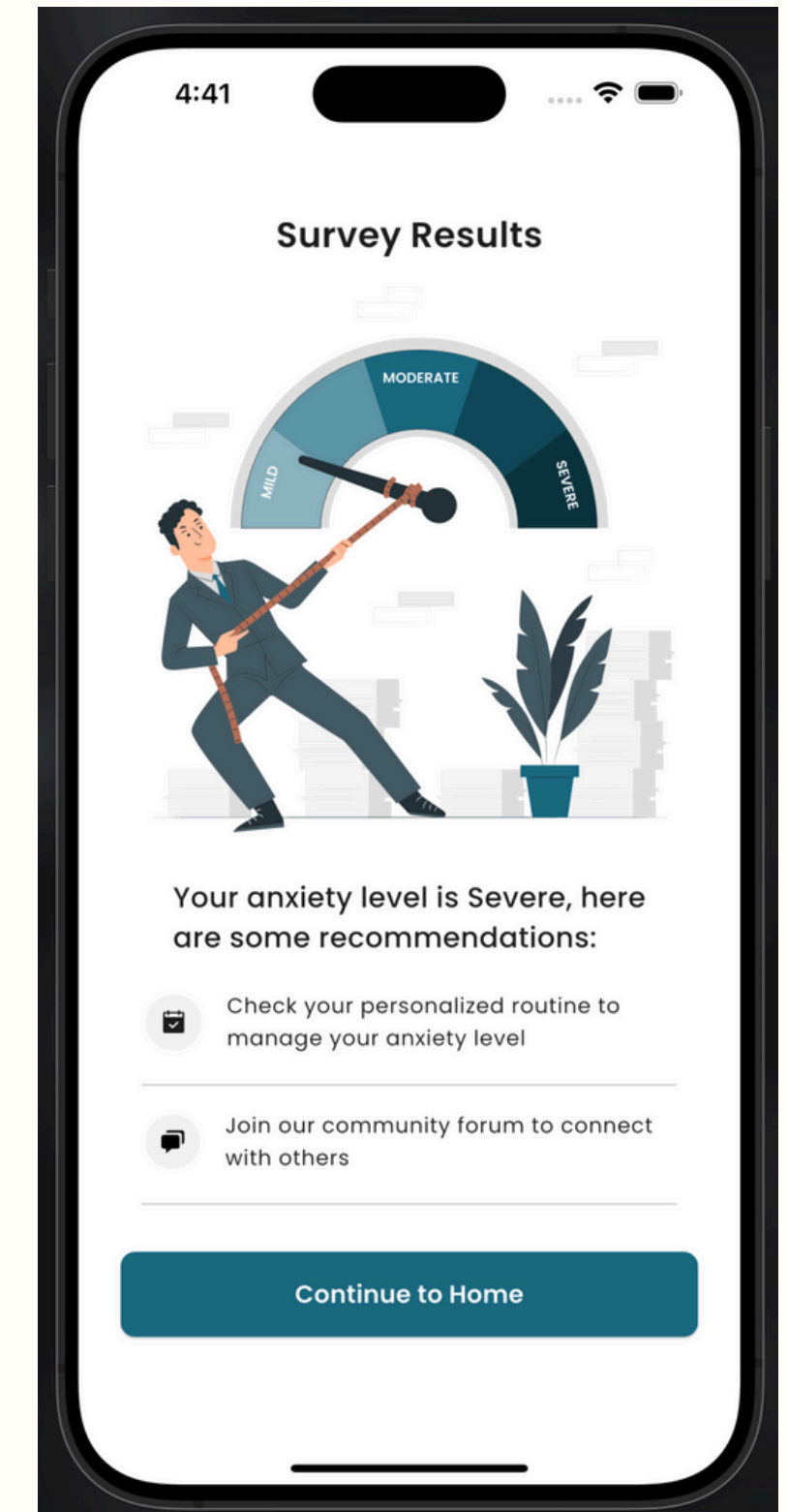
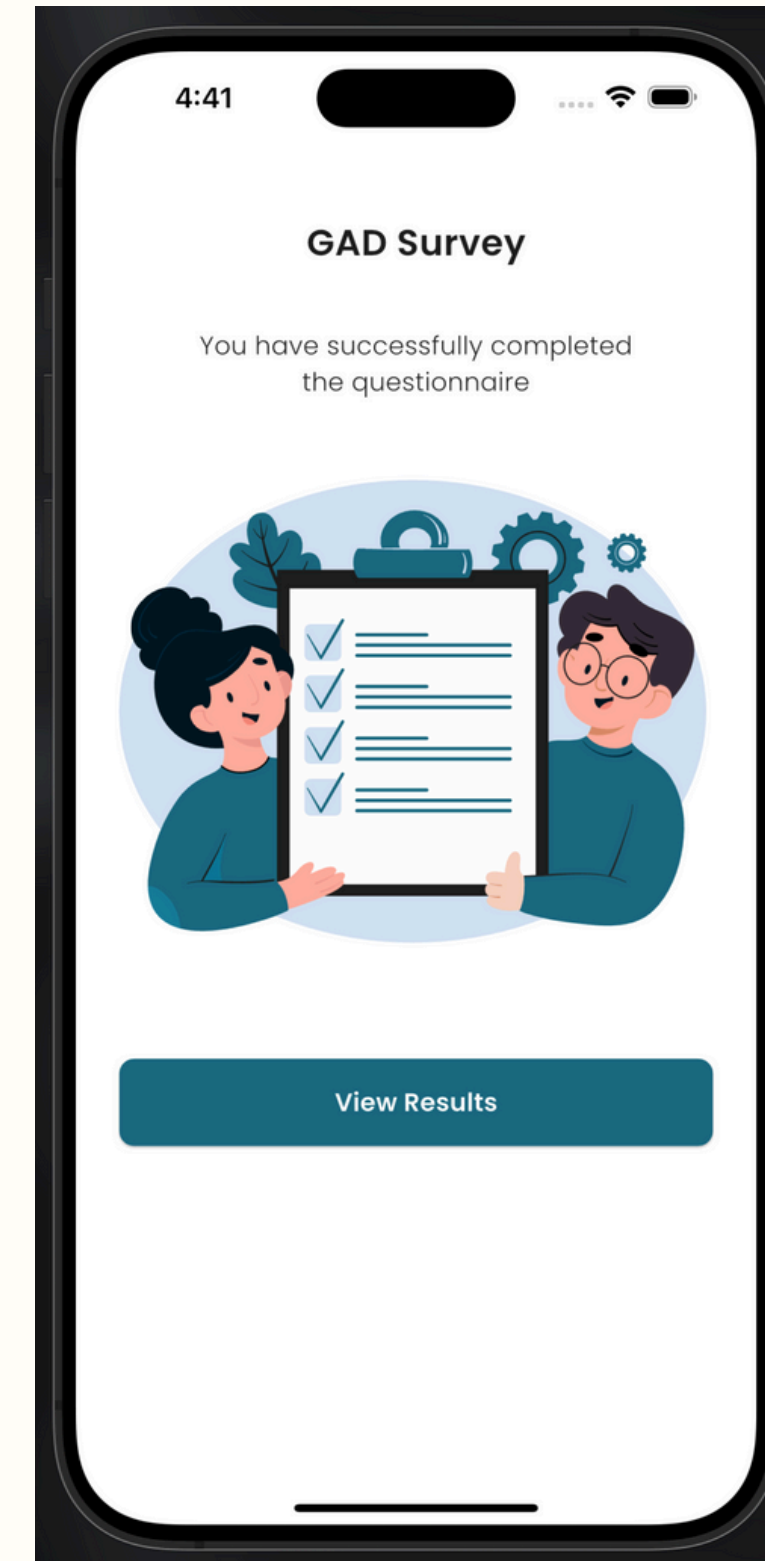
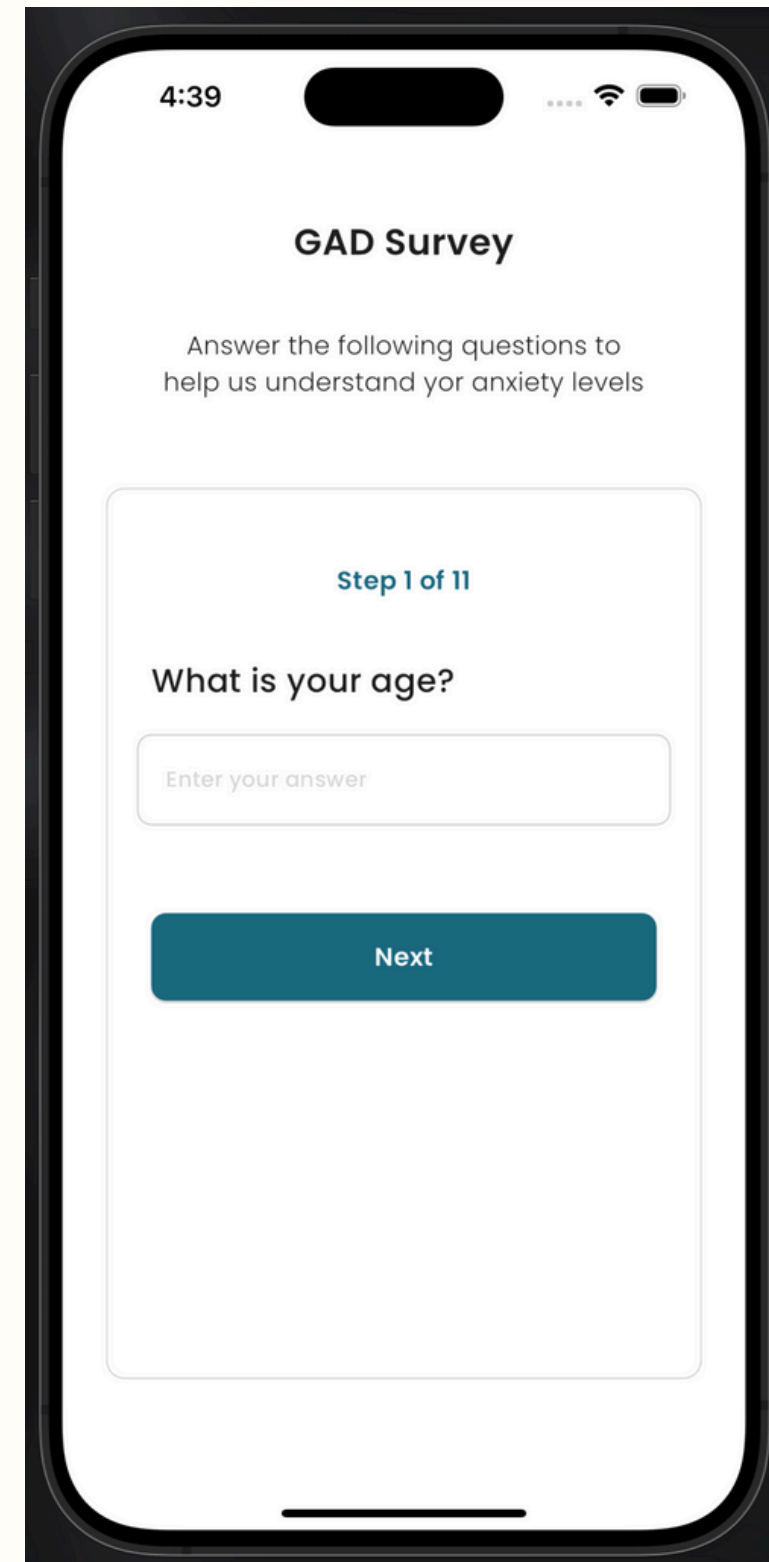
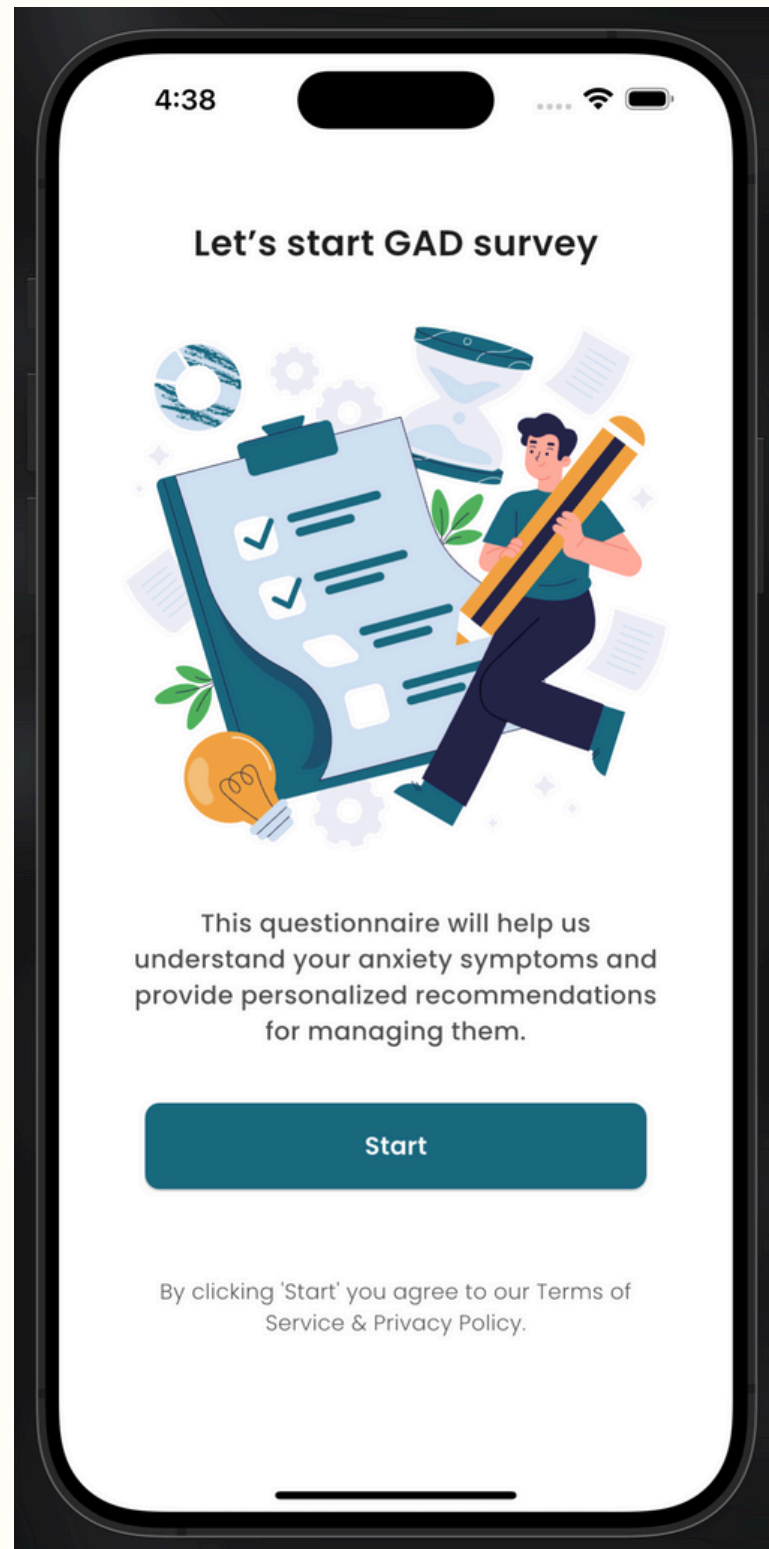


GridSearchCV

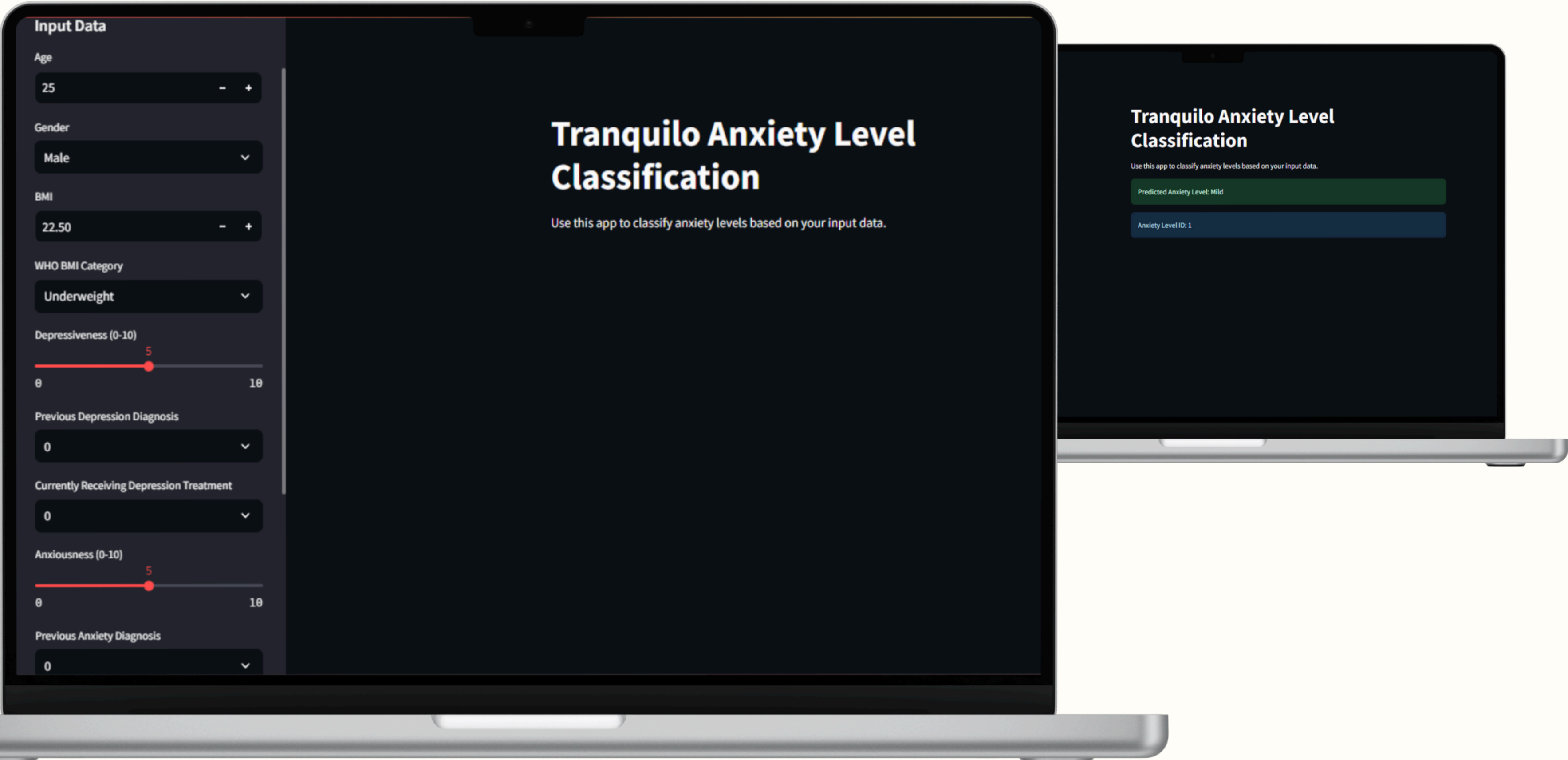
```
best_estimator_: RandomForestClassifier
```

RandomForestClassifier

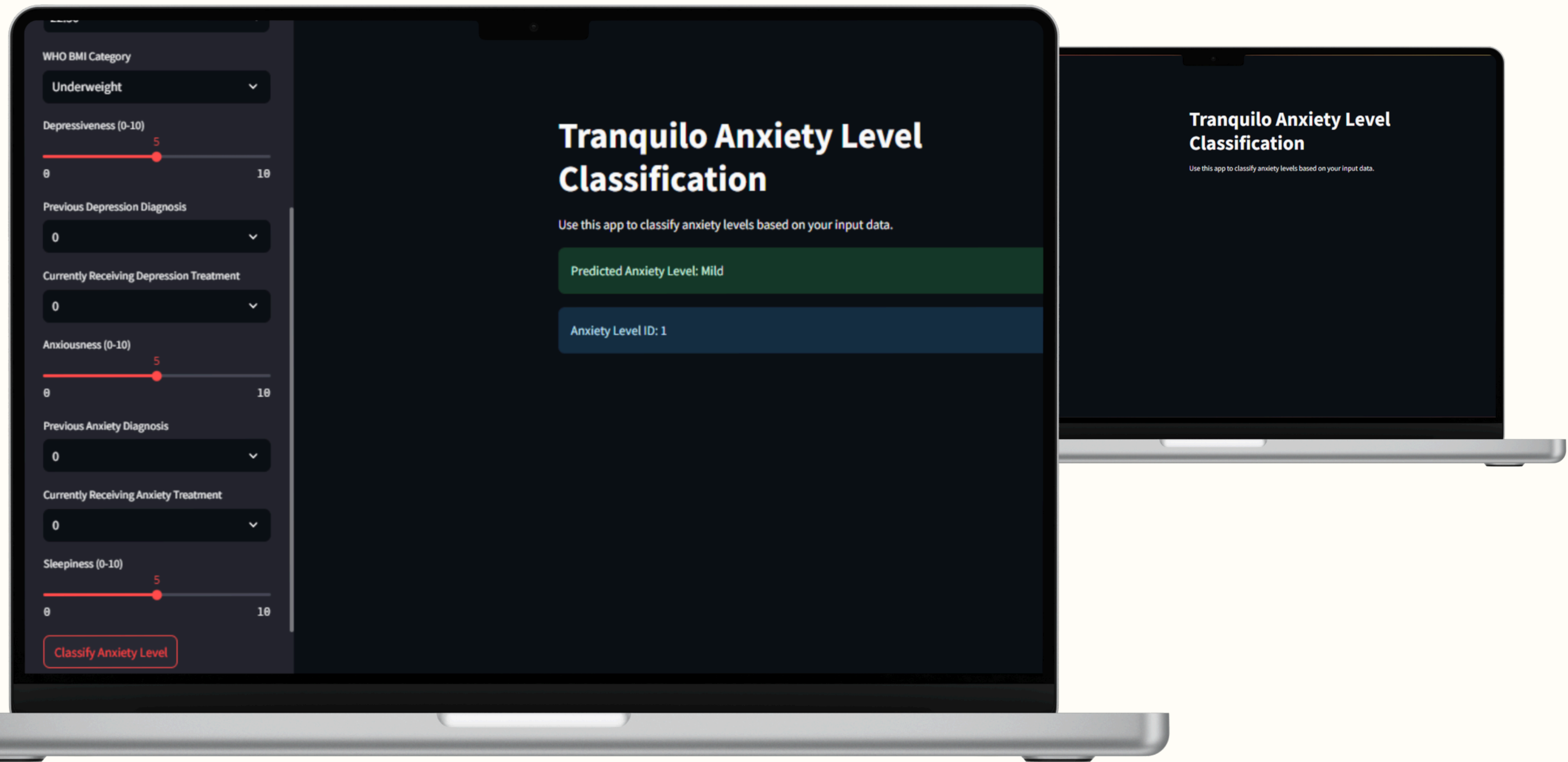
Deployment (Mobile App)



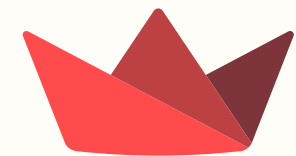
Deployment (Website)



Deployment (Website)



Technology Used



Streamlit

Related Work

1- <https://www.taylorfrancis.com/chapters/edit/10.1201/9781003522096-7/detection-generalized-anxiety-disorder-md-imran-hussain-shivam-soumay-gupta-seema-syed-rameem-zahra-yassine-aribi>

2-<https://dergipark.org.tr/en/pub/ejosat/article/999914>

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Thank You

