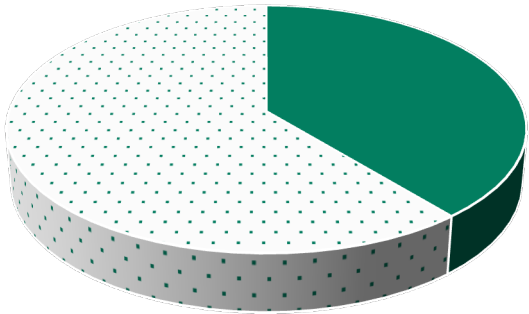# Agenda

1. Research Question and Motivation

2. Related Works

3. Introduction to Dataset

4. Proposed Approach

1. Research Question and Motivation

Student mental health has emerged as a critical issue in higher education

Educational institutions face significant challenges in supporting students

39% students

- experienced a decline in their mental health after starting university (*Cibyl report*)
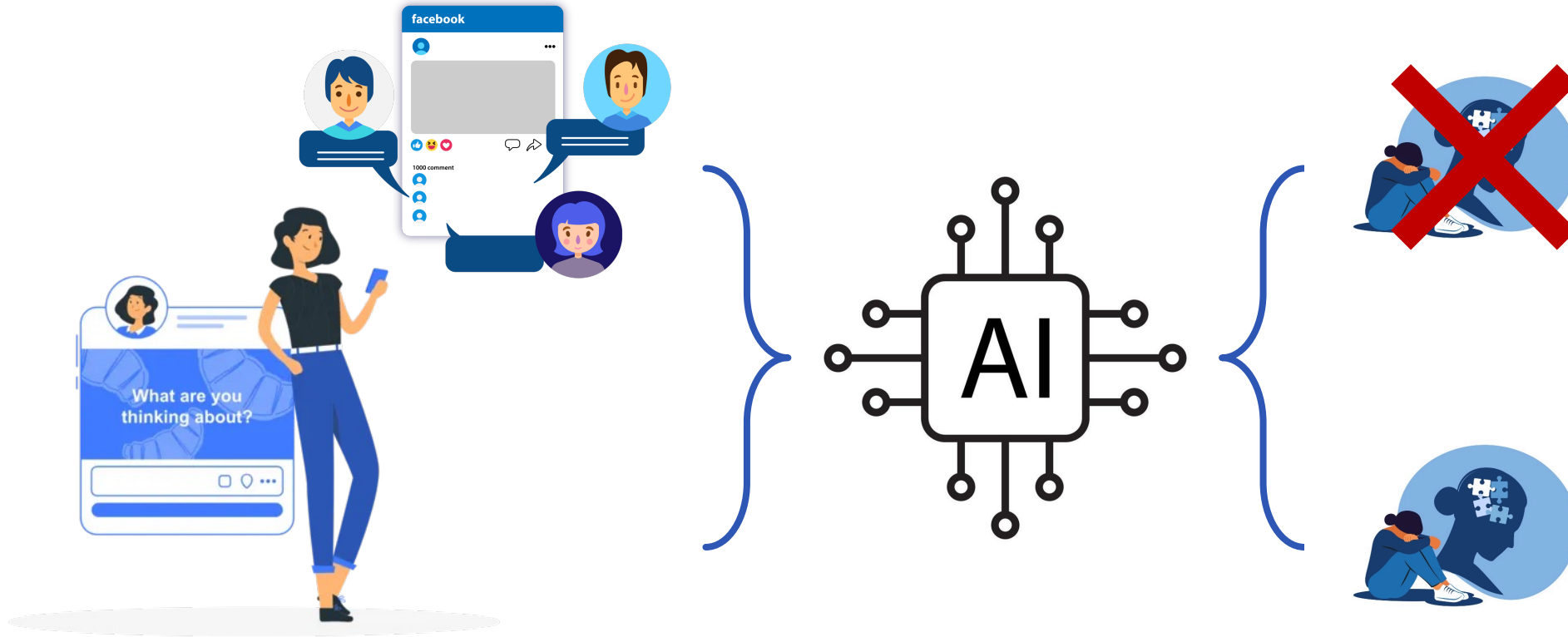
£12 billion

- was spent on mental health services (*NHS report*)

Can detect which students and when they are facing problems at an early stage on a large scale?

1. Research Question and Motivation

The rise of social media platforms has provided a great opportunity to observe human behavior and emotions on a large scale

We can develop an early detection system for mental health problem by learning writing patterns from these information

2. Related Works

- Obagbuwa et al. (2023) applied **traditional Machine Learning Classification** techniques, including Support Vector Machines (SVM), Logistic Regression, Random Forest, and XGBoost, in their research

- Zeberga et al. (2022) applied **BERT-based transformers**, which have shown superior performance due to their ability to capture contextual nuances in text.

3. Introduction to Dataset

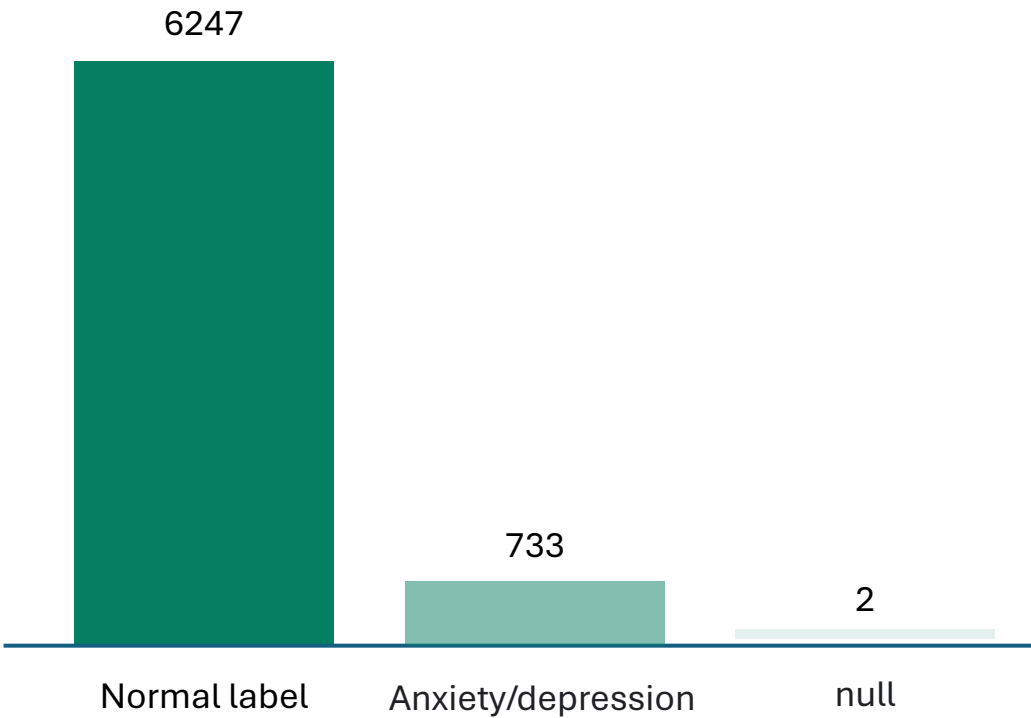| text	label
trouble sleeping, confused mind, restless heart. All out of tune	1
All wrong, back off dear, forward doubt. Stay in a restless and restless place	1
always restless every night, even though I don't know why, what's wrong. strange.	1
body comparison that doesn't make sense, I'M CRAZY Screaming	0
...	...

Table 1: Dataset Sample

Figure 1: Dataset Label

- Dataset from Kaggle, including Facebook comments and posts from undergraduate students

- 6982 records and 2 fields: one containing text and a label field indicating whether the corresponding text signifies anxiety or depression
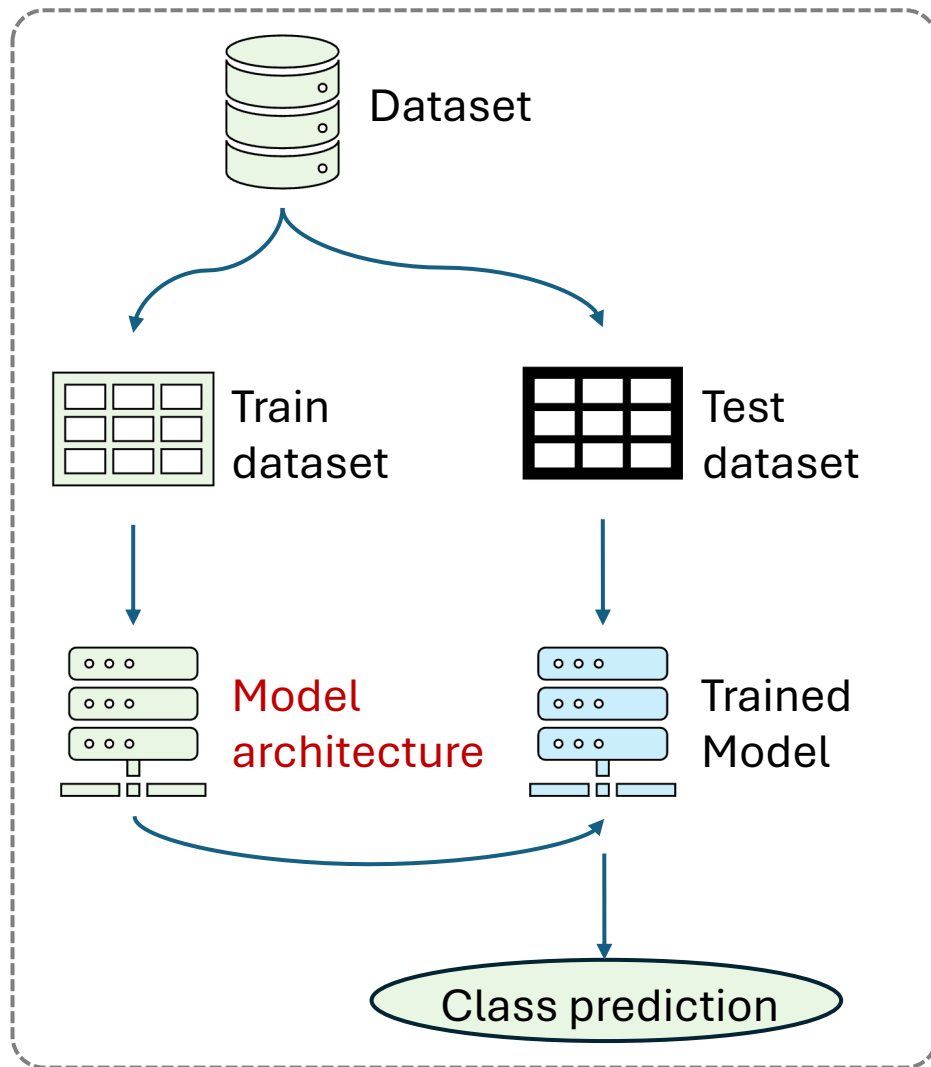
4. Proposed Approach
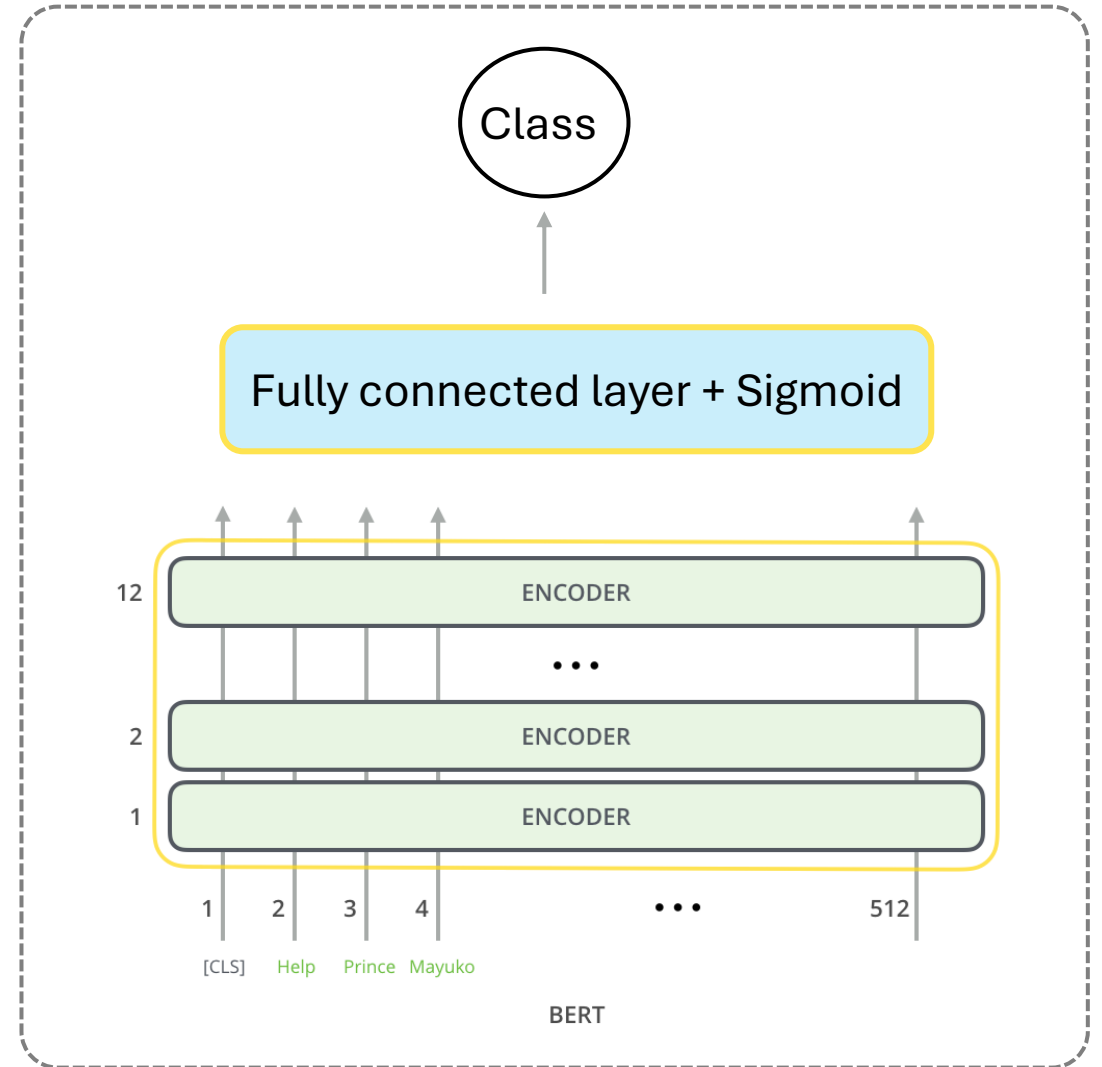

Figure 2: The flowchart of the proposed workflow

Figure 3: The flowchart of the proposed Model architecture