**Annotation Protocol and Instruction**

Identification of Posts Related to Depression Symptoms

# 1. Objective

This protocol aims to classify social media posts based on whether they contain content related to symptoms of depression, including both physical and psychological manifestations. The annotations will be used to support research on mental health and depression detection.

# 2. Post Labels and Examples

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| **Depressive symptom-related** | **Category** | **Examples** |
| Yes | Depressed mood | “The sky is as gray as my mood today. I feel exhausted even though I did nothing.”  “I’ve been feeling really down lately. There’s no major problem in my life, but I just can’t seem to be happy...” |
| Loss of pleasure or interest | “I used to love gaming, but now I don’t even want to log in. Where did my joy go?”  “I don’t want to do anything, including living.” |
| Poor concentration | “I have so much to do, but I just can’t focus. It’s driving me crazy.”  “What was I about to do? I forgot as soon as I turned around. My memory is getting worse...” |
| Feelings of excessive guilt or low self-worth | “Why do I always mess things up? Maybe I’m just not good enough.”  “It’s all my fault. If it weren’t for me, they’d probably be happier...” |
| Hopelessness about the future | “Feels like my life is stuck like this. I don’t see any hope for things to get better.”  “As a kid, I dreamed about how bright the future would be. Now, all I see is darkness ahead.” |
| Thoughts about dying or suicide | “Sometimes I think it wouldn’t be so bad if I just never woke up.”  “Lately, I’ve been having some dark thoughts. What should I do…?” |
| Disrupted sleep | “Haven’t slept well in a week. I’m a zombie during the day—I can’t take it anymore.”  “3 AM again. My eyes are tired, but my brain won’t shut off.” |
| Changes in appetite or weight | “Haven’t eaten properly in three days. The sight of food makes me nauseous.”  “Hungry, but don’t want to eat. Eating, but can’t taste anything.” |
| Feeling very tired or low in energy. | “Did nothing, but I’m as exhausted as if I ran a marathon.”  “Why am I still exhausted even after sleeping enough?” |
| Others  (Expert discretion) | “I don’t even feel sad anymore. Just…nothing.”  “Why am I even like this. Everyone else seems to be okay. why not me.” |
| No | Neutral daily life updates | “Finally finished that project—time to relax!”  “Weekend plans: Hiking with friends and maybe a movie night.” |
| Positive emotions | “So grateful for my family’s support—couldn’t have done it without them!”  “Laughing so hard with friends tonight. Needed this.” |
| Factual posts | “New study shows walking 30 mins daily improves mental health.”  “PSA: Metro Line 5 will be closed this weekend for maintenance.” |
| Encouraging | “New month, new goals. Let’s make it count!”  “Small steps still move you forward. Don’t give up!” |
| Celebrations | “Happy birthday to my bestie! Love you!”  “Graduation day! Four years of hard work paid off.” |
| Others  ((Expert discretion)) | “Just bought a new camera! Can’t wait to test it out.”  “Learning guitar—my fingers hurt but it’s worth it.” |

# 3. Annotation Instruction

**Step 1: Read the Post Carefully**

* Read the entire post without skimming to fully understand its context.
* Note the tone (e.g., sad, neutral, humorous, angry).
* Identify key phrases that may indicate emotional or mental state.

**Step 2: Labeling Decision**

* **“Yes” (Depressive Symptom-Related)**: The post meets any of the following criteria:
  + Explicit Symptoms: Direct mentions of depressive symptoms (e.g., “I feel hopeless,” “I can’t get out of bed,” “Nothing matters anymore”).
  + Implicit Indicators: Metaphorical or behavioral hints of depression (e.g., “I’m drowning in my thoughts,” “I’ve been isolating myself for weeks”).
  + Contextual Clues: Posts where the overall tone and content strongly suggest depressive feelings, even if no single phrase is definitive.
* **“No” (Depressive Symptom-Unrelated)**: Label the post as “No” when it does not meet the criteria for depressive symptom-related post.
* **Flag for Review**: Use this option when the post is ambiguous.

# 4. Quality Control

**Dual Annotation**: Each post is independently annotated by two annotators.

**Consistency Calculation**:

* Inter-annotator agreement (i.e., Cohen’s Kappa) is calculated to measure consistency.
* A minimum consistency score of **0.8** is required. If not met:
  + **Resolution**: The two annotators must discuss and reconcile differences. If unresolved, a senior reviewer arbitrates.
  + **Re-annotation**: Low consistency (e.g., <0.7) may require re-annotation.

**Pilot Testing**:

* Annotators must complete **50 posts** and pass a qualification test.
  + **Passing Criteria**: Achieve ≥90% accuracy (vs. gold-standard labels).
* **Remediation**: Failed candidates undergo retraining and re-evaluation.