

Annotation Guidelines for SenWave

1. Sentiment Categories

- 1) Positive: optimistic, thankful, empathetic
- 2) Negative: pessimistic, anxious, sad, annoyed, denial
- 3) Neural: official report, and
- 4) Other: joking

2. Label Definitions

- 1) optimistic (representing hopeful, proud, and trusting emotions)
- 2) thankful (expressing gratitude for efforts to combat the virus)
- 3) empathetic (including prayers and compassionate sentiments)
- 4) pessimistic (reflecting a sense of hopelessness)
- 5) anxious (conveying fear and apprehension)
- 6) sad
- 7) annoyed (expressing anger or frustration)
- 8) denial (towards conspiracy theories)
- 9) official report
- 10) joking (irony or humor)

3. Examples

1) English examples

--Single label

- a. optimistic: Nothing last forever, Corona Virus will Vanish this month. "Happy New Month"
- b. thankful: Gratitude to those who are involved to safeguard our lives from fatal Corona virus. Thanks to them. #LetUsPrayForCoronaFighters
- c. empathetic: Allah ap ko bhi safa ata fermain. Ameen. Be strong. IA Allah will give full and speedy recovery. #coronavirus
- d. pessimistic: things won't go back to normal #COVID19 #coronavirus #pandemic #MIT Anxious I don't feel good and I don't know if I'm just exhausted from working so much or if I have corona
- e. sad: When someone you know.. apart of your family dies from the Coronavirus it's shocking; unexplainable. My whole day has been down.
- f. Annoyed: Stop asking to change location man hat how you will spread corona. Fooook Denial Unpopular and Insensitive Thought... Corona and Quarantine is a marketing campaign by OTT platforms...!!
- g. official report: Now schools in Ontario won't be open until May due to the Coronavirus which might post-pone the 2019-2020 school year to July or August.
- h. Joking: Calling Corona Virus "rona" like she the nastiest little girl in the 5th grade. #coronavirusmemes #5G

-- Multiple labels

- a. empathetic, and sad: So heart breaking any way you see it Prayers to all the families affected by the Covid-19.

- b. pessimistic, and joking: if i get curved ima go somewhere packed to give myself coronavirus
- c. anxious, and pessimistic: Does everyone realize we're going to reach a million cases of this coronavirus by the weekend?
- d. denial, sad, and annoyed: Why is it that no one ever reports on the number of people who recovered from Coronavirus?
- e. joking, and annoyed: My uncle paranoid about corona virus but still goes to work pick one

2) Arabic examples

Category	Example
	Single label
Optimistic	والله من يطبق ما يريجه من عادات حتى بعد كورونا. وكل شخص ينال على الجنب التي يريجه. لعلها خير!
Empathetic	يا ريت نخصص لو خمس دقائق كل يوم لندعي ربنا يخلصنا من هالبلاد العظيم ، كورونا شلتنا
Anxious	هكينا منك مالنا خلق نزورك في السجن تعرفين كورونا وخافين
Annoyed	اللهم شل اطرافك اللهم اجعل كورونا تعبت بجسدك يامفسد يابن سته وستين كلب سوف يتم ابلاغ الجهات المختصة وسوف تحاسب عجل غير اجل
Joking	ميونك فايروس كورونا ، و قلبي صيني مايتحمل
	Multiple labels
Anxious, Sad	صرنا نخاف من الامراض والشهور ونسينا الخوف من الله كانت المساجد تذكرنا اليوم الاعلام كله يخوفنا من كورونا
Optimistic, Empathetic	ربنا الشافي، ازمة كورونا ازالنا غطاء السلوفان الإنساني الرقيق من علي هذا الشعب

4. Annotator Consistency

- a. Check the duplication of the tweets and their annotation. For example, tweet A has labels X,Y,Y. We take majority voting. Choose Y for tweet A. NOTE that each tweet is labeled in one out of 4 general category, positive, negative, neutral and joking. We don't allow multi-label in this case.
- b. However, each tweet may be annotated by multiple sub-categories. For example, tweet A has labels (X,Y), (Y,Z). We take the overlap of the annotations. Then Choose Y for tweet A.

5. Inter-annotator Agreement

- a. Average inter-rater agreement (IRA): <https://www.statology.org/inter-rater-reliability/#:~:text=In%20general%2C%20an%20inter%2Drater,be%20needed%20in%20specific%20fields.>
- b. Cohen's kappa coefficient: https://en.wikipedia.org/wiki/Cohen%27s_kappa