**Emotion Annotation: Guidelines**

In the following, we report the task description and the guidelines used for training the coders involved in the emotion annotation study.

*Task Description and Annotation Guidelines.* You are invited to take part in the annotation study of developers' contributed comments in GitHub. We are interested in annotating the presence of emotions in technical non-code artifacts authored by developers during their online interactions.

The data source is the official GitHub, the data collected is from repositories primarily written in 10 different languages. You will be required to annotate randomly selected comments, from either issue, comment or pull requests of the said languages. The unit of annotation is the entire comment.

You will use the coding schema reported in TABLE A. For each post, please indicate what emotion it conveys (if any) among the basic emotions (first column in the table), that are, *love, joy, surprise, anger, sadness, fear* and *neutral*. Multiple Emotion labels are allowed but you should try to avoid them if possible. You can use the second and third level in the schema as a reference for choosing the primary emotion, as shown in TABLE B.

Table A. Updated Imran et al. Emotion Framework (additional categories are shown in blue)

| **Basic Emotion** | **Secondary Emotion** | **Tertiary Emotion** |
| --- | --- | --- |
| Anger | Irritation | Annoyance, Agitation, Grumpiness, Aggravation, Grouchiness |
| Exasperation | Frustration |
| Rage | Anger, Fury, Hate, Dislike, Resentment, Bitterness |
| Envy | Jealousy |
| Disgust | Revulsion, Contempt, Loathing |
| Disapproval | - |
| Fear | Horror | Alarm, Fright, Panic, Terror, Fear, Hysteria, Shock, Mortification |
| Nervous | Anxiety, Distress, Worry, Uneasiness,Tenseness |
| Joy | Cheerfulness | Happiness, Amusement, Satisfaction, Bliss, Jolliness, Joy, Delight, Enjoyment, Gladness |
| Zest | Enthusiasm, Excitement, Thrill, Zeal |
| Contentment | Pleasure |
| Optimism | Eagerness, Hope |
| Pride | Triumph |
| Relief | - |
| Approval | - |
| Admiration | - |
| Agree | - |
| Love | Liking, Caring, Compassion, Fondness, Affection, Love, Attraction, Tenderness, Sentimentality, Adoration |
| Sadness | Suffering | Hurt, Agony |
| Sadness | Depression, Sorrow, Hopelessness, Glumness, Unhappiness, Grief, Misery |
| Disappointment | Displeasure |
| Shame | Guilt, Regret |
| Neglect | Embarrassment, Insecurity, Insult, Rejection, Defeat, Dejection, Humiliation |
| Sympathy | Pity, Concern |
| Surprise | Surprise | Amazement, Astonishment |
| Confusion | - |
| Curiosity | - |
| Realization | - |
| Neutral | Convey / Suggest (no strong emotions) | |

Table B. Example of annotated comments

In the table: names are anonymized to "<name>"; profanities are shown as "\*\*\*\*"; examples from each language are random and don't imply a specific correlation with emotions. Every language can exhibit a similar range.

| **Language** | **Comment** | **Emotion** | **Secondary/**  **Tertiary emotion** |
| --- | --- | --- | --- |
| Python | @<name> we use common sense. Is that good enough for you? | Anger | Bitterness |
| TypeScript | hello s\*\*\* man | Anger | Hostility |
| Rust | Does this work for you? You should get more output.. maybe this isn't the right call? | Fear | Worry |
| Lua | This change is breaking some integration tests, because the value should be in seconds and `3000` is a number too large. | Fear | Alarm |
| Go | As far as I understand, in case of an interface holding the error value, the compile-time type checking will be bypassed. In case that is correct, is there a way to force a compile-time error? | Joy | Hope |
| HCL | In the next commit I fixed this | Joy | Pride |
| Kotlin | It was done by autoformatter. Sorry, I've overlooked it. | Sadness | Shame |
| C | This is a deprecated syntax no more supported  [exception]: Executing test client: tail: cannot open '+30' for reading: No such file or directory. | Sadness | Disappointment |
| Shell | $ zsh --version  zsh 5.8 (x86\_64-ubuntu-linux-gnu) | Neutral | Code |
| Lua | It was pointed out by <name>. | Neutral | Convey |

In the table of examples presented within this research paper: names have been anonymized to "<name>" to ensure privacy; profanities are redacted as "\*\*\*\*"; and while one illustrative example has been chosen from each language, it's vital to note that the selection is arbitrary and doesn't imply any correlation with specific emotions. Every language can exhibit the range of emotions demonstrated. These selections are merely random representations.

**References**

[1] Guidelines Format: [**https://github.com/collab-uniba/EmotionDatasetMSR18**](https://github.com/collab-uniba/EmotionDatasetMSR18)

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[2] Emotion Framework: Imran et. al. + ‘Neutral’ class addition

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