

This project aims to use Natural Language Processing techniques to judge if a reply is helpful for the question. In that case, this project needs to create a database including questions, corresponding replies, and scores to rate how helpful a reply is. All questions and replies are collected from social media, such as Reddit. Results of these annotations would be stored in a public dataset which is accessible for all UM teachers, staff, and students. This dataset will be used to train NLP programs which will be used to justify whether a reply is helpful to answer the question on entire sites like Quora and StackOverflow.

For every pair of question and reply, this project uses a 5-point Likert scale to rate how helpful the reply is. The 5 scales correspond to 5 different levels of helpfulness:(5)-Very helpful;(4)- Mostly helpful;(3)-Moderately helpful;(2)-Slightly helpful;(1)-Not at all helpful. Annotators do not need to judge whether a reply is correct or not. Annotators rate the level of helpfulness based on how much related information the reply provides. The detailed annotation guidelines are provided in the table below.

(5)- Very helpful	<p>A reply covers all parts of the questions and answers the question correctly in a meaningful way by first providing specific information to the question and then providing sufficient explanations.</p> <p>Examples of sufficient explanations include</p> <ol style="list-style-type: none"> 1) Provides something personal like personal perspectives and thoughts or a personal experience beyond the one-word answer the question originally asks for. 2) Answer with a good reference like an external link to a webpage or video 	<p>Examples that are “5”:</p> <p><i>What’s the worst job you’ve ever had?</i></p> <ul style="list-style-type: none"> • <i>I was 13. I got a job picking strawberries at a local farm. They paid \$4 a quart, which already was crappy, but then they’d send is back out if it wasn’t heaped as high as possible. Turns out they’d then take the overflow and fill a second quart with it, and not pay us for those ones. We were children! Who does that?!</i>
		<p>Examples that are NOT “5”:</p> <p><i>What do anti-depressants actually do and why do some people need them?</i></p> <ul style="list-style-type: none"> • <i>Makes people less sad.</i> <p>The reply above only answers the first part “what do anti-depressants actually do” but does not answer the second part “why do some people need them”.</p> <p><i>What are some great horror/sad books to read?</i></p>

	<p>3) A sincere answer with rich emotions or empathy</p>	<ul style="list-style-type: none"> <i>The Road and The Wolf Road, two unconnected post-apocalyptic books that just happen to have similar titles.</i> <p>The reply above does not explain why these two books are the great book answers the first part “what do anti-depressants actually do” but does not answer the second part “why do some people need them”.</p>
(4)- Mostly helpful	<p>A reply provides a direct answer to the question but does not provide reasonings. This kind of reply especially applies to questions that do not require an explanation explicitly, i.e. not including phrases like “and why”, but the answer can still be improved by providing some explanations.</p> <p>A common example of such a scenario is when the original question is a who, what, where, when type of question and the reply is abrupt and only consists of a specific noun phrase without further elaboration and enough context that helps the OP make sense of the answer.</p>	<p>Examples that are “4”:</p> <p><i>What was your greatest example of “mission failed successfully”?</i></p> <ul style="list-style-type: none"> <i>I tripped in front of my crush. He caught me.</i> <p>The answer does provide a direct answer to the “what” type question but the reply does not explain why the example described is the “greatest example of mission failed successfully”</p> <p><i>What is the most uncomfortable family gathering you've ever experienced?</i></p> <ul style="list-style-type: none"> <i>My grandpa slapped my aunt Imagine the aftermath</i>
		<p>Examples that are NOT “4”:</p> <p><i>What would you consider the most valuable possession you have, and why?</i></p> <ul style="list-style-type: none"> <i>A 1661 prayer book, a 1905 set of military maps of Indochina, and a human femur from the (estimated) 1920s. And a atlas compiled by my great-grandfather when he mapped the western Sahara in the 1910-1920s. And my son.</i> <p>The answer does answer the question directly but does not include reasoning which makes it a candidate for “4”.</p>

		However, the question itself explicitly asks for “why” which makes it a “3” (see below)
(3)- Moderately helpful	<p>A reply fails to answer all components of the questions. Sometimes an OP may ask a question that includes multiple subquestions. Common examples include: “... and why?” or “ELI5:...”. The OP would expect the reply to answer all subquestions.</p> <p>OR</p> <p>A reply that refutes/disproves the validity of the OP’s question, especially disproves some conditional statements in the original question AND the reply provides some elaboration about why he/she thinks the OP’s question has some logic flaws.</p> <p>OR</p> <p>A reply that does not directly answer the question but is discussing the same topic as the original question and provides some additional information beyond the question itself, i.e a reply that is not simply rephrasing the question(see below).</p>	<p>Examples that are “3”:</p> <p><i>What are commonly/rarely asked interview questions that someone should be prepared for?</i></p> <ul style="list-style-type: none"> • <i>Why are you the best candidate for the job?</i> <p><i>Lmfao/lmao/haha/lol. Are you really doing these when you text them or just staring at the screen expressionless. What's the weirdest thing you were doing while texting these responses?</i></p> <ul style="list-style-type: none"> • <i>Usually just use lol as a way to show tone. Would sound hostile or not light hearted otherwise. Other ones it depends.</i> <p>Examples that are NOT “3”:</p> <p>a. <i>How do you think 2021 would be, if the Internet was never invented?</i></p> <ul style="list-style-type: none"> • <i>Just like before the internet was invented.</i> <p>This answer would be rated a “2” because it does not provide any useful information.</p>
(2)- Slightly Helpful	A reply that is vague and general and no explanation is	<p>Examples that are “2”:</p> <p>b. <i>Is it true that the legal age in China is 14, and how does that work?</i></p>

	<p>given regardless of the type of the question given(e).</p> <p>OR</p> <p>A reply that does not provide any useful information beyond the question itself by paraphrasing the original question. Such a reply does not add in any new insight.(c)(d)</p> <p>OR</p> <p>A reply that refutes the question's validity but does not explain why he or she refutes the question. In such a case, the replier is indifferent and does not bother to help the OP. (b)</p>	<ul style="list-style-type: none"> • <i>I'm confused how you're confused on how that would work.</i> <p>c. <i>By firefighter law/ rule is it illegal to have a passcode lock on a bedroom door and lock it when you leave?</i></p> <ul style="list-style-type: none"> • <i>I wouldn't even worry about it. My house my rules.</i> <p>d. <i>Why or why not does everything happen for a reason?</i></p> <ul style="list-style-type: none"> • <i>Because things usually happen as a result of other things. So like. That's the reason for it.</i> <p>e. <i>Ladies, what is your worst encounter with a "nice guy"?</i></p> <ul style="list-style-type: none"> • <i>They are all the worst.</i> <p>Examples that are NOT "2":</p> <p>a. <i>What happens if you put silica gel on your crotch? It sucks the humidity out so does the crotch not stink?</i></p> <ul style="list-style-type: none"> • <i>I needed to read this today.</i> <p>This is an example of "1" because the answer is not relevant to the question in any sense.</p>
(1)- Not at all helpful	<p>A reply that is any of the following:</p> <ol style="list-style-type: none"> 1) An trolling answer which can be inflammatory, insincere, digressive, extraneous or off-topic according to Wikipedia.(a) 	<p>Examples that are "1":</p> <p>a. <i>What crazy thing will happen in the next 6 months?</i></p> <ul style="list-style-type: none"> • <i>I may break my streak of not pooping for 8 months</i> <p>b. <i>What are 2 characters from different franchises that would be 100% best friends?</i></p> <ul style="list-style-type: none"> • <i>Ronald McDonald and Burger King</i>

	<p>2) Something that is clearly irrelevant to the question.(b)</p> <p>3) Making fun of the question by taking advantage of some loopholes or puns in the phrases of the question. (c)</p> <p>OR</p> <p>A reply that includes sexual puns/jokes, drug-related content, and racist comments when the OP does not intend to discuss any of the above.(d)</p>	<p>c. <i>What song would you prefer to have been released by a different artist?</i></p> <ul style="list-style-type: none"> • <i>Yes i would like mr brightside to be painted by van gohe</i> <p>The word “artist” in the question refers to a song artist but the reply gives an example of a painter who is also an artist.</p> <p>d. <i>What's your plan for when you check the shower and the ghost really is there?</i></p> <ul style="list-style-type: none"> • <i>Have sex with it?</i> <p>Examples that are NOT “1”:</p> <p><i>What is something that you CANT STAND to see others doing, but you are guilty of doing yourself?</i></p> <ul style="list-style-type: none"> • <i>Being an annoying d*ckhead</i> <p>This is not an example of troll. Although the word d*ckhead is offensive, it is not used to insult OP.</p>
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