Setup

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May 11, 2022

1. Miniconda + Modules

transforEmotion uses the reticulate package to automatically install a standalone miniconda version on your computer. The first time you run the transformer_scores function miniconda will begin installing. By having a standalone miniconda installed through transforEmotion, you should not have any conflicts between miniconda and existing Python installations. The miniconda installation takes a few minutes to complete. At some points it might seem like the installer is stuck but give it a few moments and the installer should complete its process in no time.

After installing miniconda, there are several Python modules that need to be installed. Once again, transforEmotion will download these modules to your miniconda installation to avoid conflicts with previous Python installations. The modules should install in a few minutes.

2. huggingface Transformers

You can use any number of huggingface text classification transformers. transforEmotion currently implements the zero-shot classification models only. Future updates to the package may include opportunities to train and fine-tune these models but for now there are several options that work well for most classification tasks straight out-of-the-box. You can view different transformers that can be used in transforEmotion here: https://huggingface.co/models?pipeline_tag=zero-shot-classification.

3. Using transformer_scores

As mentioned in section 1, the first time you run transformer_scores miniconda and the necessary modules will be installed. Next, Cross-Encoder’s DistilRoBERTa transformer model will be downloaded. So, the easiest way to get started is by using an example

```r
# Load data
data(neo_ipip extraversion)

data(neo_ipip extraversion)$friendliness[1:5] # positively worded items only

text <- neo_ipip extraversion$friendliness[1:5] # positively worded items only

transformer_scores(
  text = text,
  classes = c(
    "friendly", "gregarious", "assertive",
    "active", "excitement", "cheerful"
  )
)
```

The downloads will take some time. Once you have miniconda and the modules installed, you won’t have to install them again. The same goes for the transformer models: You will only need to download them once.
Assuming all goes well with the above code, you should see output that looks like this

```
$`make friends easily`
  friendly  gregarious  assertive  active  excitement  cheerful
  0.579    0.075    0.070     0.071    0.050     0.155

$`warm up quickly to others`
  friendly  gregarious  assertive  active  excitement  cheerful
  0.151    0.063    0.232     0.242    0.152     0.160

$`feel comfortable around people`
  friendly  gregarious  assertive  active  excitement  cheerful
  0.726    0.044    0.053     0.042    0.020     0.115

$`act comfortably around people`
  friendly  gregarious  assertive  active  excitement  cheerful
  0.524    0.062    0.109     0.183    0.019     0.103

$`cheer people up`
  friendly  gregarious  assertive  active  excitement  cheerful
  0.071    0.131    0.156     0.190    0.362     0.089
```

If you want to run `transformer_scores` over additional text, then you can simply enter that text into the `text` argument of the function. The transformer models that you’ve used during your R session will remain in R’s environment until you exit R or remove them from your environment.

That’s it! You’ve successfully obtained sentiment analysis scores from Cross-Encoder’s DistilRoBERTa transformer model. Now, go forth and quantify the qualitative!