category	feature name	type
app meta	downloads	numeric
	pegi	categoric (n>2)
	reviews	numeric
	sizeMB	numeric
	stars	numeric
	type	categoric $(n>2)$
noti object	category	categoric (n>2)
	appPackage	categoric (n>2)
	posted_month_start	categoric (n=2)
	posted_month_end	categoric (n=2)
	posted_quarter	categoric (n>2)
	posted_quarter_start	categoric (n=2)
	posted_quarter_end	categoric (n=2)
	posted_year_start	categoric (n=2)
	posted_year_end	categoric (n=2)
	posted_month	categoric (n>2)
	posted_weekofyear	numeric
	posted_dayofweek	categoric (n>2)
	posted_dayofmonth	numeric
	posted_hour	numeric
	posted_min	numeric
	posted_is_weekend	categoric (n=2)
	posted_season	categoric (n>2)
	posted_partofday	categoric (n>2)
	is_holiday	categoric (n=2)
noti text	punc_!	categoric (n=2)
	punc_"	categoric (n=2)
	punc_"	categoric (n=2)
	punc_"	categoric (n=2)
	punc_#	categoric (n=2)
	punc_\$	categoric (n=2)
	punc_%	categoric (n=2)
	punc_&	categoric (n=2)
	punc_'	categoric (n=2)
	punc_,	categoric (n=2)
	punc_(categoric (n=2)
	punc_)	categoric (n=2)
	punc_*	categoric (n=2)
	punc_+	categoric (n=2)
	punc,	categoric (n=2)
	punc	categoric (n=2)
	punc	categoric (n=2)
	P 4	000080110 (11-2)

```
categoric (n=2)
punc_/
                                      categoric (n=2)
punc_:
punc_;
                                      categoric (n=2)
                                      categoric (n=2)
\mathrm{punc}_{-}<
                                      categoric (n=2)
punc_=
                                      categoric (n=2)
punc >
punc_?
                                      categoric (n=2)
punc_@
                                      categoric (n=2)
                                      categoric (n=2)
punc_[
                                      categoric (n=2)
punc_\
                                      categoric (n=2)
punc_]
punc__
                                      categoric (n=2)
punc
                                      categoric (n=2)
punc_'
                                      categoric (n=2)
punc_{
                                      categoric (n=2)
                                      categoric (n=2)
punc__
punc_}
                                      categoric (n=2)
punc \sim
                                      categoric (n=2)
emoji_Smileys & Emotion
                                      numeric
emoji_Travel & Places
                                      numeric
emoji Objects
                                      numeric
emoji_People & Body
                                      numeric
emoji\_Symbols
                                      numeric
emoji_Food & Drink
                                      numeric
emoji_Activities
                                      numeric
emoji_Animals & Nature
                                      numeric
emoji\_Flags
                                      numeric
has_entity
                                      categoric (n=2)
entity_MISC
                                      numeric
entity EMOJI
                                      numeric
entity_DATE
                                      numeric
entity MONEY
                                      numeric
entity_LOC
                                      numeric
entity_PER
                                      numeric
entity_ORG
                                      numeric
entity None
                                      numeric
entity_EMAIL
                                      numeric
{\bf entity\_TWITTERNAME}
                                      numeric
entity_URL
                                      numeric
entity\_SMILIE
                                      numeric
speechact\_statement
                                      categoric (n=2)
speechact\_command/request
                                      categoric (n=2)
speechact_introduction
                                      categoric (n=2)
speechact_evaluation
                                      categoric (n=2)
speechact_question
                                      categoric (n=2)
```

```
speechact agreement
                                     categoric (n=2)
speechact_suggestion/recommendation categoric (n=2)
speechact_well-wishing
                                     categoric (n=2)
speechact_desire/need/hope
                                     categoric (n=2)
                                     categoric (n=2)
speechact commitment/promise
speechact_greeting
                                     categoric (n=2)
speechact\_warning
                                     categoric (n=2)
speechact_gratitude
                                     categoric (n=2)
speechact_congratulation
                                     categoric (n=2)
speechact_apology/condolence
                                     categoric (n=2)
speechact_offer
                                     categoric (n=2)
speechact permission
                                     categoric (n=2)
speechact_regret
                                     categoric (n=2)
speechact disagreement
                                     categoric (n=2)
{\it emotion\_Excitement}
                                     categoric (n=2)
emotion No emotion
                                     categoric (n=2)
emotion Disgust/Dislike
                                     categoric (n=2)
emotion_Joy/Like
                                     categoric (n=2)
emotion_Unknown emotion
                                     categoric (n=2)
emotion Surprise
                                     categoric (n=2)
emotion\_Anger
                                     categoric (n=2)
emotion Angst
                                     categoric (n=2)
emotion_Fear
                                     categoric (n=2)
emotion Sadness
                                     categoric (n=2)
has_question
                                     categoric (n=2)
question_Yes/No question
                                     numeric
question_Declarative question
                                     numeric
question_Open-ended question
                                     numeric
question Unknown question type
                                     numeric
question_Rhetorical question
                                     numeric
question Or question
                                     numeric
question_Task question
                                     numeric
question_Tag question
                                     numeric
pos tag CC
                                     numeric
pos tag CD
                                     numeric
pos\_tag\_DT
                                     numeric
pos_tag_EX
                                     numeric
pos_tag_FW
                                     numeric
pos_tag_IN
                                     numeric
pos_tag_JJ
                                     numeric
pos_tag_JJR
                                     numeric
pos_tag_JJS
                                     numeric
pos_tag_LS
                                     numeric
pos_tag_MD
                                     numeric
```

categoric (n=2)

speechact speculation

```
pos_tag_NN
                                    numeric
pos tag NNS
                                    numeric
pos_tag_NNP
                                    numeric
pos\_tag\_NNPS
                                    numeric
pos_tag_PDT
                                    numeric
pos tag POS
                                    numeric
pos_tag_PRP
                                    numeric
pos_tag_PRP$
                                    numeric
pos_tag_RB
                                    numeric
pos\_tag\_RBR
                                    numeric
pos_tag_RBS
                                    numeric
pos_tag_RP
                                    numeric
pos tag SYM
                                    numeric
pos_tag_TO
                                    numeric
pos\_tag\_UH
                                    numeric
pos\_tag\_VB
                                    numeric
pos_tag_VBD
                                    numeric
pos_tag_VBG
                                    numeric
pos_tag_VBN
                                    numeric
pos_tag_VBP
                                    numeric
pos\_tag\_VBZ
                                    numeric
pos_tag_WDT
                                    numeric
pos\_tag\_WP
                                    numeric
pos_tag_WP$
                                    numeric
pos_tag_WRB
                                    numeric
sentiment\_Unknown sentiment
                                    categoric (n=2)
sentiment\_Negative
                                    categoric (n=2)
sentiment_Neutral
                                    categoric (n=2)
sentiment_Positive
                                    categoric (n=2)
sarcasm Non-sarcastic
                                    categoric (n=2)
sarcasm_Sarcastic
                                    categoric (n=2)
has date
                                    categoric (n=2)
date_today
                                    categoric (n=2)
date_tonight
                                    categoric (n=2)
date tomorrow
                                    categoric (n=2)
date yesterday
                                    categoric (n=2)
                                    categoric (n=2)
date\_weekend
count stopwords
                                    numeric
count_unique_emojis
                                    numeric
count\_emojis
                                    numeric
count_mentions
                                    numeric
count_htags
                                    numeric
count_words_in_quotes
                                    numeric
count_capital_words
                                    numeric
count_capital_chars
                                    numeric
```

count_chars	numeric
avg_word_length	numeric
count_words	numeric
avg_sentence_length	numeric
count_sentences	numeric
$count_unique_numeric_chars$	$\operatorname{numeric}$
count_numeric_chars	$\operatorname{numeric}$
$count_unique_special_chars$	numeric
count_special_chars	$\operatorname{numeric}$
$count_unique_currency_symbol$	$\operatorname{numeric}$
count_currency_symbol	numeric
position_emoji	categoric (n>2)
position_mention	categoric (n>2)
position_htag	categoric (n>2)
$position_words_in_quotes$	categoric (n>2)
position_capital_words	categoric (n>2)
position_numeric_chars	categoric (n>2)
position_special_chars	categoric (n>2)
position_currency_symbol	categoric (n>2)
sentiment_polarity	numeric
sentiment_subjectivity	numeric