SENTIMENT ENGINE DIAGRAM: CONVOLUTIONAL NEURAL NETWORKS TWO CHANNEL APPROACH, THREE FILTERS
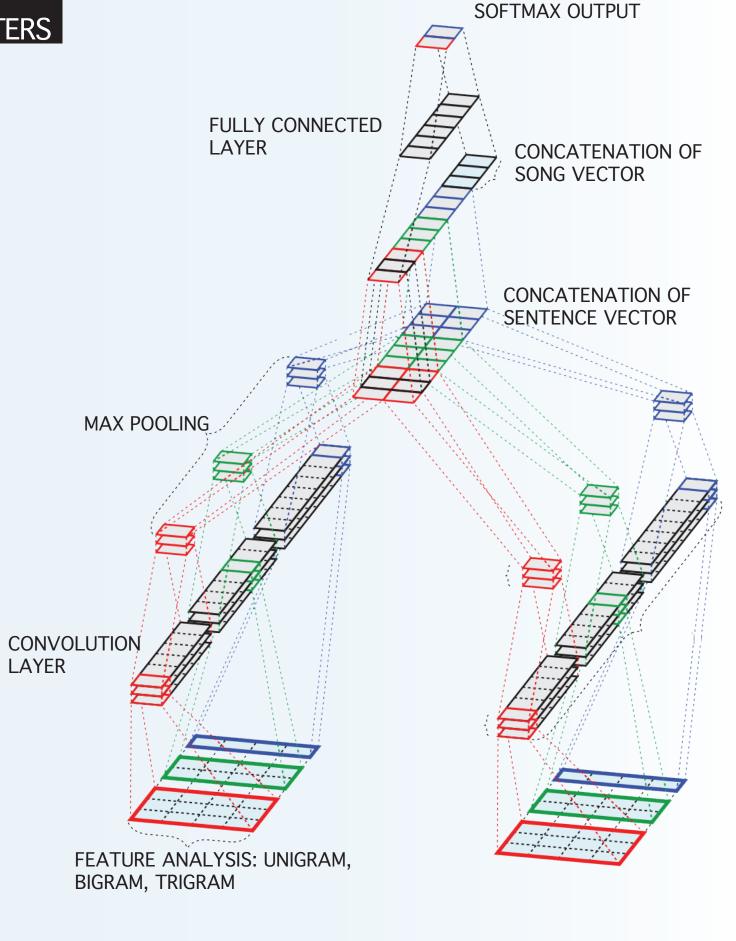
SOFTMAX OUTPUT

FULLY CONNECTED LAYER

CONCATENATION OF SONG VECTOR

NLP Processing

Analysis Tools

Document-Term Matrix

SONGS	WORD1	WORD2 . . . M
Song1	C11	C12…M
Song2	C21	C22…M
SongN	CN1	CN2…M

CONCATENATION OF SENTENCE VECTOR

Data: Rap Lyrics

Tokenizing
Normalizing
Include/Exclue
Stemming

SenticNet

LIWC

word2vec

WORDSTAT

NRC Word-Emotion Association Lexicon

SentiWords

Document-Property Dataframe

SONGS	PROPERTY 1 VALUE 1	PROPERTY M VALUE N
Song1	C1-11	C1…M
Song2	C2-11	C2…M
SongN	CN-11	CN…M

MAX POOLING

CONVOLUTION LAYER

CONSOLIDATION & FORMATING OF DATA

WORD, SENTENCE ANALYSIS TOOLS

NATURAL LANGUAGE PROCESSING STEPS

CONTENT VS STYLE APPROACH, TWO CHANNELS

FEATURE ANALYSIS: UNIGRAM, BIGRAM, TRIGRAM

TWO CHANNELS