The Amusemeter Captioner is a web app that lets machine learning dip its toes into the waters of witty wordplay by inventing image captions that make you smile. To do this, a Neural Network image classifier joins hands with NLP to algorithmically dance right to the verbographic punchline.

• Data: 5500 images from IMAGENET, 1500 English idioms from <https://7esl.com>, and corpuses: SentiWordNet, Gensim Text8, and GoogleNews

• Pretrained Neural Network (Xception) used for image classification

• Gensim Word2Vec used to identify words related to the image label

• Scikit-learn to make TF-IDF correlation matrix (over 3 billion datapoints) between SentiWordNet corpus and IMAGENET labels to identify words related to the image label

• NTLK, Levenshstein, and phonetics packages: Pronunciation, Phonetics, and English-to-IPA used to identify similarly sounding words (rhymes, assonances, etc.)

• Notable result: A streamlit app that takes any image, classifiies its content, and algorithmically invents a caption that indirectly relates to the image’s content