

In my testing of the ASR model, I tried a variety of literary names of locations, people and objects (from Harry Potter, Game of Thrones etc), as well as real names of stores, places and people (American or not), scientific terminology referring to nature, a classical composer and some of his musical pieces, as well as whole sentences in English, but uttered with a strong Greek accent. The recognition performance of the model was better than expected, being able to recognize almost every utterance that I made, usually within a couple of repetitions. The lowest scores were observed for scientific names in Latin and non-American names, where the model failed to recognize the utterance in most of the cases. Perhaps the addition to the model of a speech recognition in a variety of languages (i.e. not only recognition of American English) would solve this restriction. Surprisingly, the utterances with the Greek accent were accurately detected, achieving scores almost as high as the utterances produced with the American accent (as a non-natural speaker of American English, my pronunciation may have not been very clear to the model). To print the confidence scores, I used the original *'dm.ts'* code, adding a *console.log* command.

Some examples of my tests:

-Fictional names:

- Dumbledore [Harry Potter character] -> Recognized at the first try (confidence score: 0.6325396)
- Horcrux [magical object in Harry Potter] -> Recognized at the fourth try. First tries: 'Horror Cruise', (confidence score:  $\approx 0.12047672$ ) / Forth try: recognized (confidence score: 0.16256048)
- Jabberwockies [non-sense word. *Jabberwocky* is the name of a poem by Lewis Carroll] -> Recognized (unexpectedly) at the second try. First try: 'Driver walkies' (confidence score: 0.11119965) / Second try: recognized (confidence score: 0.61741555).

-Real, non-American names:

- Linköping [Swedish town]: Could not be recognized. 'Clean\Leave\In shipping' (confidence score:  $\approx 0.25078604$ )
- Pressbyrå: [Swedish convenience store] -> Could not be recognized. 'Presbyterian' (confidence score: 0.04614447), 'Raspberry' (0.10886651), 'Risperone' (0.05244072)
- Vlad [non-American person's name]-> Could not be recognized. 'Blood' (confidence scores: 0.18258208, 0.61222905, 0.32522416).

-Scientific names [in Latin]:

- Helianthus annuus[=sunflower]-> Could not be recognized. 'Helian Posanos' (confidence score: 0.08919863), 'Helianthus' (0.06998189), 'Heliancus and News' (0.091228634)
- Tursiops truncatus[=dolphin]-> Could not be recognized. 'Tour Soups. Tourcantes' (confidence score: 0.17048918), 'Tips to Recantas' (0.07928762), 'Tour COPS. Truncantus' (0.09429641).

American VS non-American accent example:

- 'This is a test sentence'-> Recognized (uttered with a Greek accent: confidence score of 0.91780657 / American accent: 0.9313874).