

PRÁCTICA 4. Reconocimiento de voz usando pocketsphinx.

Ejemplos de frases que se pueden reconocer de acuerdo con la gramática “restaurant.gram”

Hay tres tipos de frases que puede se pueden reconocer:

- JUSTINA seguido de cualquiera de las siguientes palabras: YES | NO | WAIT | START | TAKE A ORDER | THIS IS THE ORDER.
 - o Ejemplo: JUSTINA YES
 - o Ejemplo: JUSTINA TAKE A ORDER
- I WANT seguido de la partícula A (que es opcional) seguido de cualquiera de las siguientes palabras: PRINGLES | CHIPS | PASTA | COOKIES | PASTA | NOODLES | TUNA FISH | PICKLES | CHOCO FLAKES | ROBO O'S | MUESLI | M AND M seguido de la conjunción AND seguido de cualquiera de las siguientes palabras: PRINGLES | CHIPS | PASTA | COOKIES | PASTA | NOODLES | TUNA FISH | PICKLES | CHOCO FLAKES | ROBO O'S | MUESLI | M AND M
 - o Ejemplo: I WANT COOKIES AND PASTA
 - o Ejemplo: I WANT A COOKIES AND PASTA
 - o Ejemplo: I WANT M AND M AND MUESLI
 - o Ejemplo: I WANT CHIPS AND CHIPS
- I WANT A seguido de cualquiera de las siguientes palabras: TEA | BEER | COKE | WATER
 - o Ejemplo: I WANT A BEER
 - o Ejemplo: I WANT A WATER

Explicación breve de lo que significan los siguientes cuatro parámetros del archivo pocketsphinx_test.launch:

- gram: es el nombre del archivo donde se declara la gramática (la estructuración y el orden) de las frases que se pueden usar para el reconocimiento de voz.
- dict: es el nombre del archivo donde se establece la fonética de cada una de las palabras que acepta el reconocimiento de voz.
- grammar: Se refiere al nombre del tipo de gramática que se va a usar para el reconocimiento de voz.
- rule: Se refiere al tipo de regla de gramática que utilizará para hacer el reconocimiento gramatical del reconocimiento de voz.

Capturas de pantalla donde se muestran las frases reconocidas:

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dzp@marcohdzp-HP-Laptop-15-bs0xx: ~/MobileRobots-2020-2-for-Covid19
INFO: fsg_search.c(869): fsg 0.14 CPU 0.095 xRT
INFO: fsg_search.c(871): fsg 2.74 wall 1.472 xRT
[INFO] [1587611824.251557]: OUTPUT: "JUSTINA YES"
INFO: cmn_live.c(120): Update from < 25.15 -10.24 2.13 3.03 6.75 -4.1
INFO: cmn_live.c(138): Update to < 24.32 -3.32 -0.86 2.81 4.42 -1.1
INFO: fsg_search.c(859): 158 frames, 1884 HMMs (11/fr), 6692 senones (43)

INFO: fsg_search.c(869): fsg 0.14 CPU 0.091 xRT
INFO: fsg_search.c(871): fsg 2.74 wall 1.472 xRT
[INFO] [1587611826.992230]: OUTPUT: "JUSTINA NO"
INFO: cmn_live.c(120): Update from < 24.32 -3.32 -0.86 2.81 4.42 -1.1
INFO: cmn_live.c(138): Update to < 23.85 -4.08 0.20 3.48 3.00 -0.3
INFO: fsg_search.c(859): 182 frames, 1406 HMMs (7/fr), 6066 senones (33)

INFO: fsg_search.c(869): fsg 0.17 CPU 0.095 xRT
INFO: fsg_search.c(871): fsg 2.86 wall 1.561 xRT
[INFO] [1587611829.849549]: OUTPUT: "JUSTINA WAIT"
INFO: cmn_live.c(120): Update from < 23.85 -4.08 0.20 3.48 3.00 -0.3
INFO: cmn_live.c(138): Update to < 23.58 -6.02 0.33 2.39 2.67 0.4
INFO: fsg_search.c(859): 191 frames, 1382 HMMs (7/fr), 5961 senones (33)

INFO: fsg_search.c(869): fsg 0.17 CPU 0.089 xRT
INFO: fsg_search.c(871): fsg 2.82 wall 1.468 xRT
[INFO] [1587611832.670103]: OUTPUT: "JUSTINA START"
INFO: cmn_live.c(88): Update from < 23.58 -6.02 0.33 2.39 2.67 0.4
INFO: cmn_live.c(105): Update to < 23.88 -6.12 0.56 3.51 3.02 -0.6
INFO: cmn_live.c(120): Update from < 23.88 -6.12 0.56 3.51 3.02 -0.6
INFO: cmn_live.c(138): Update to < 23.84 -4.14 -1.27 3.83 2.88 -0.4
INFO: fsg_search.c(859): 207 frames, 1716 HMMs (8/fr), 6778 senones (33)

INFO: fsg_search.c(869): fsg 0.17 CPU 0.084 xRT
INFO: fsg_search.c(871): fsg 2.96 wall 1.472 xRT
[INFO] [1587611835.628991]: OUTPUT: "JUSTINA TAKE A ORDER"
INFO: cmn_live.c(88): Update from < 23.84 -4.14 -1.27 3.83 2.88 -0.4
INFO: cmn_live.c(105): Update to < 24.79 -3.49 -0.55 3.73 3.76 -0.1
INFO: cmn_live.c(120): Update from < 24.79 -3.49 -0.55 3.73 3.76 -0.1
INFO: cmn_live.c(138): Update to < 23.63 -3.60 -0.95 3.12 3.51 -0.1
INFO: fsg_search.c(859): 236 frames, 1980 HMMs (8/fr), 7985 senones (33)

INFO: fsg_search.c(869): fsg 0.21 CPU 0.087 xRT
INFO: fsg_search.c(871): fsg 3.50 wall 1.476 xRT
[INFO] [1587611839.129142]: OUTPUT: "JUSTINA THIS IS THE ORDER"
INFO: cmn_live.c(88): Update from < 23.63 -3.60 -0.95 3.12 3.51 -0.1

dzp@marcohdzp-HP-Laptop-15-bs0xx: ~/MobileRobots-2020-2-for-Covid19
INFO: fsg_search.c(869): fsg 0.37 CPU 0.096 xRT
INFO: fsg_search.c(871): fsg 6.06 wall 1.569 xRT
[INFO] [1587611845.187042]: OUTPUT: "I WANT PRINGLES AND CHOCO FLAKES"
INFO: cmn_live.c(88): Update from < 25.17 -3.81 0.29 -0.24 0.29 -0.58
INFO: cmn_live.c(105): Update to < 26.92 -2.16 -2.05 -2.25 -1.47 -0.49
INFO: cmn_live.c(120): Update from < 26.92 -2.16 -2.05 -2.25 -1.47 -0.49
INFO: cmn_live.c(138): Update to < 26.38 -5.39 -0.47 -2.79 -1.47 -0.21
INFO: fsg_search.c(859): 301 frames, 5300 HMMs (17/fr), 16488 senones (54)

INFO: fsg_search.c(869): fsg 0.31 CPU 0.102 xRT
INFO: fsg_search.c(871): fsg 4.91 wall 1.566 xRT
[INFO] [1587611850.099234]: OUTPUT: "I WANT PASTA AND CHIPS"
INFO: cmn_live.c(88): Update from < 26.38 -5.39 -0.47 -2.79 -1.47 -0.21
INFO: cmn_live.c(105): Update to < 27.69 -2.84 -2.49 -4.15 -3.41 -0.57
INFO: cmn_live.c(120): Update from < 27.69 -2.84 -2.49 -4.15 -3.41 -0.57
INFO: cmn_live.c(138): Update to < 26.83 -4.64 -1.68 -4.69 -3.03 -0.74
INFO: fsg_search.c(859): 337 frames, 4725 HMMs (14/fr), 13462 senones (39)

INFO: fsg_search.c(869): fsg 0.26 CPU 0.078 xRT
INFO: fsg_search.c(871): fsg 4.96 wall 1.467 xRT
[INFO] [1587611855.060483]: OUTPUT: "I WANT PASTA AND PASTA"
INFO: cmn_live.c(88): Update from < 26.83 -4.64 -1.68 -4.69 -3.03 -0.74
INFO: cmn_live.c(105): Update to < 27.39 -2.27 -2.89 -3.21 -3.46 -0.73
INFO: cmn_live.c(120): Update from < 27.39 -2.27 -2.89 -3.21 -3.46 -0.73
INFO: cmn_live.c(138): Update to < 26.96 -5.09 -2.32 -3.75 -3.15 -0.45
INFO: fsg_search.c(859): 314 frames, 7343 HMMs (23/fr), 21295 senones (67)

INFO: fsg_search.c(869): fsg 0.33 CPU 0.105 xRT
INFO: fsg_search.c(871): fsg 6.22 wall 1.971 xRT
[INFO] [1587611861.285058]: OUTPUT: "I WANT A PASTA AND CHIPS"
INFO: cmn_live.c(88): Update from < 26.96 -5.09 -2.32 -3.75 -3.15 -0.45
INFO: cmn_live.c(105): Update to < 27.33 -3.82 -2.54 -2.63 -3.65 -0.31
INFO: cmn_live.c(120): Update from < 27.33 -3.82 -2.54 -2.63 -3.65 -0.31
INFO: cmn_live.c(138): Update to < 25.26 -4.52 -2.62 -2.31 -3.04 -0.50
INFO: fsg_search.c(859): 192 frames, 4278 HMMs (22/fr), 11732 senones (61)

INFO: fsg_search.c(869): fsg 0.23 CPU 0.120 xRT
INFO: fsg_search.c(871): fsg 5.51 wall 2.854 xRT
[INFO] [1587611866.794625]: OUTPUT: "I WANT A TEA"
INFO: cmn_live.c(120): Update from < 25.26 -4.52 -2.62 -2.31 -3.04 -0.50
INFO: cmn_live.c(138): Update to < 25.16 -2.28 -4.18 -1.81 -1.81 -1.81
INFO: fsg_search.c(859): 177 frames, 4109 HMMs (23/fr), 11579 senones (33)

INFO: fsg_search.c(869): fsg 0.18 CPU 0.100 xRT
INFO: fsg_search.c(871): fsg 3.05 wall 1.712 xRT
[INFO] [1587611869.844547]: OUTPUT: "I WANT A BEER"
INFO: cmn_live.c(88): Update from < 25.16 -2.28 -4.18 -1.81 -1.81 -1.81
INFO: cmn_live.c(105): Update to < 25.64 -1.17 -4.40 -1.95 -1.95 -1.95
INFO: cmn_live.c(120): Update from < 25.64 -1.17 -4.40 -1.95 -1.95 -1.95
INFO: cmn_live.c(138): Update to < 24.17 -1.12 -4.83 -3.22 -3.22 -3.22
INFO: fsg_search.c(859): 192 frames, 4068 HMMs (21/fr), 11014 senones (33)

INFO: fsg_search.c(869): fsg 0.20 CPU 0.101 xRT
INFO: fsg_search.c(871): fsg 2.91 wall 1.507 xRT
[INFO] [1587611872.754637]: OUTPUT: "I WANT A COKE"
INFO: cmn_live.c(88): Update from < 24.17 -1.12 -4.83 -3.22 -3.22 -3.22
INFO: cmn_live.c(105): Update to < 24.65 0.72 -5.90 -4.27 -4.27 -4.27
INFO: cmn_live.c(120): Update from < 24.65 0.72 -5.90 -4.27 -4.27 -4.27
INFO: cmn_live.c(138): Update to < 24.29 0.65 -5.95 -4.28 -4.28 -4.28
INFO: fsg_search.c(859): 177 frames, 3431 HMMs (19/fr), 9471 senones (33)

INFO: fsg_search.c(869): fsg 0.17 CPU 0.097 xRT
INFO: fsg_search.c(871): fsg 2.91 wall 1.633 xRT
[INFO] [1587611875.663276]: OUTPUT: "I WANT A WATER"
^C[audio_control-3] killing on exit
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