**Myprosody**

**Example usage**

Gender recognition and mood of speech: Function *myspgend(p,c)*

import myprosody as mysp

p="Walkers" # Audio File title

c=r"C:\Users\Shahab\Desktop\Mysp" # Path to the Audio\_File directory (Python 3.7)

mysp.myspgend(p,c)

[] a female, mood of speech: Reading, p-value/sample size= :0.00 5

Pronunciation posteriori probability score percentage: Function *mysppron(p,c)*

import myprosody as mysp

p="Walkers" # Audio File title

c=r"C:\Users\Shahab\Desktop\Mysp" # Path to the Audio\_File directory (Python 3.7)

mysp.mysppron(p,c)

[]Pronunciation\_posteriori\_probability\_score\_percentage= :85.00

Detect and count number of syllables: Function *myspsyl(p,c)*

import myprosody as mysp

p="Walkers" # Audio File title

c=r"C:\Users\Shahab\Desktop\Mysp" # Path to the Audio\_File directory (Python 3.7)

mysp.myspsyl(p,c)

[]number\_ of\_syllables= 154

Detect and count number of fillers and pauses: Function *mysppaus(p,c)*

import myprosody as mysp

p="Walkers" # Audio File title

c=r"C:\Users\Shahab\Desktop\Mysp" # Path to the Audio\_File directory (Python 3.7)

mysp.mysppaus(p,c)

[]number\_of\_pauses= 22

Measure the rate of speech (speed): Function *myspsr(p,c)*

import myprosody as mysp

p="Walkers" # Audio File title

c=r"C:\Users\Shahab\Desktop\Mysp" # Path to the Audio\_File directory (Python 3.7)

mysp.myspsr(p,c)

[]rate\_of\_speech= 3 # syllables/sec original duration

Measure the articulation (speed): Function *myspatc(p,c)*

import myprosody as mysp

p="Walkers" # Audio File title

c=r"C:\Users\Shahab\Desktop\Mysp" # Path to the Audio\_File directory (Python 3.7)

mysp.myspatc(p,c)

[]articulation\_rate= 5 # syllables/sec speaking duration

Measure speaking time (excl. fillers and pause): Function *myspst(p,c)*

import myprosody as mysp

p="Walkers" # Audio File title

c=r"C:\Users\Shahab\Desktop\Mysp" # Path to the Audio\_File directory (Python 3.7)

mysp.myspst(p,c)

[]speaking\_duration= 31.6 # sec only speaking duration without pauses

Measure total speaking duration (inc. fillers and pauses): Function *myspod(p,c)*

import myprosody as mysp

p="Walkers" # Audio File title

c=r"C:\Users\Shahab\Desktop\Mysp" # Path to the Audio\_File directory (Python 3.7)

mysp.myspod(p,c)

[]original\_duration= 49.2 # sec total speaking duration with pauses

Measure ratio between speaking duration and total speaking duration: Function *myspbala(p,c)*

import myprosody as mysp

p="Walkers" # Audio File title

c=r"C:\Users\Shahab\Desktop\Mysp" # Path to the Audio\_File directory (Python 3.7)

mysp.myspbala(p,c)

[]balance= 0.6 # ratio (speaking duration)/(original duration)

Measure fundamental frequency distribution mean: Function *myspf0mean(p,c)*

import myprosody as mysp

p="Walkers" # Audio File title

c=r"C:\Users\Shahab\Desktop\Mysp" # Path to the Audio\_File directory (Python 3.7)

mysp.myspf0mean(p,c)

[]f0\_mean= 212.45 # Hz global mean of fundamental frequency distribution

Measure fundamental frequency distribution SD: Function *myspf0sd(p,c)*

import myprosody as mysp

p="Walkers" # Audio File title

c=r"C:\Users\Shahab\Desktop\Mysp" # Path to the Audio\_File directory (Python 3.7)

mysp.myspf0sd(p,c)

[]f0\_SD= 57.85 # Hz global standard deviation of fundamental frequency distribution

Measure fundamental frequency distribution median: Function *myspf0med(p,c)*

import myprosody as mysp

p="Walkers" # Audio File title

c=r"C:\Users\Shahab\Desktop\Mysp" # Path to the Audio\_File directory (Python 3.7)

mysp.myspf0med(p,c)

[]f0\_MD= 205.7 # Hz global median of fundamental frequency distribution

Measure fundamental frequency distribution minimum: Function *myspf0min(p,c)*

import myprosody as mysp

p="Walkers" # Audio File title

c=r"C:\Users\Shahab\Desktop\Mysp" # Path to the Audio\_File directory (Python 3.7)

mysp.myspf0min(p,c)

[]f0\_min= 77 # Hz global minimum of fundamental frequency distribution

Measure fundamental frequency distribution maximum: Function *myspf0max(p,c)*

import myprosody as mysp

p="Walkers" # Audio File title

c=r"C:\Users\Shahab\Desktop\Mysp" # Path to the Audio\_File directory (Python 3.7)

mysp.myspf0max(p,c)

[]f0\_max= 414 # Hz global maximum of fundamental frequency distribution

Measure 25th quantile fundamental frequency distribution: Function *myspf0q25(p,c)*

import myprosody as mysp

p="Walkers" # Audio File title

c=r"C:\Users\Shahab\Desktop\Mysp" # Path to the Audio\_File directory (Python 3.7)

mysp.myspf0q25(p,c)

[]f0\_quan25= 171 # Hz global 25th quantile of fundamental frequency distribution

Measure 75th quantile fundamental frequency distribution: Function *myspf0q75(p,c)*

import myprosody as mysp

p="Walkers" # Audio File title

c=r"C:\Users\Shahab\Desktop\Mysp" # Path to the Audio\_File directory (Python 3.7)

mysp.myspf0q75(p,c)

[]f0\_quan75= 244 # Hz global 75th quantile of fundamental frequency distribution

Overview: Function *mysptotal(p,c)*

import myprosody as mysp

p="Walkers" # Audio File title

c=r"C:\Users\Shahab\Desktop\Mysp" # Path to the Audio\_File directory (Python 3.7)

mysp.mysptotal(p,c)

number\_ of\_syllables 154

number\_of\_pauses 22

rate\_of\_speech 3

articulation\_rate 5

speaking\_duration 31.6

original\_duration 49.2

balance 0.6

f0\_mean 212.45

f0\_std 57.85

f0\_median 205.7

f0\_min 77

f0\_max 414

f0\_quantile25 171

f0\_quan75 244

Compared to native speech, here are the prosodic features of your speech: Function *mysp.myprosody(p,c)*

import myprosody as mysp

p="Walkers" # Audio File title

c=r"C:\Users\Shahab\Desktop\Mysp" # Path to the Audio\_File directory (Python 3.7)

*mysp.myprosody(p,c)*

Compared to native speech, here are the prosodic features of your speech:

average\_syll\_pause\_duration: (:Out of Range)

No.\_long\_pause: 25.000000 (% percentile )

speaking\_time: 25.000000 (% percentile )

ave\_No.\_of\_words\_in\_minutes: (:Out of Range)

articulation\_rate: 66.666667 (% percentile )

No.\_words\_in\_minutes: 25.000000 (% percentile )

formants\_index: 25.000000 (% percentile )

f0\_index: 66.666667 (% percentile )

f0\_quantile\_25\_index: (:Out of Range)

f0\_quantile\_50\_index: (:Out of Range)

f0\_quantile\_75\_index: 33.333333 (% percentile )

f0\_std: 25.000000 (% percentile )

f0\_max: 33.333333 (% percentile )

f0\_min: (:Out of Range)

No.\_detected\_vowel: 25.000000 (% percentile )

perc%.\_correct\_vowel: 66.666667 (% percentile )

(f2/f1)\_mean: 66.666667 (% percentile )

(f2/f1)\_std: 33.333333 (% percentile )

no.\_of\_words: 25.000000 (% percentile )

no.\_of\_pauses: 25.000000 (% percentile )

intonation\_index: 33.333333 (% percentile )

(voiced\_syll\_count)/(no\_of\_pause): 66.666667 (% percentile )

TOEFL\_Scale\_Score: 66.666667 (% percentile )

Score\_Shannon\_index: 66.666667 (% percentile )

speaking\_rate: 25.000000 (% percentile )

*Spoken Language Proficiency Level* estimator, based on **Machine Learning models** of the prosodic features of your speech:

Function mysp.mysplev*(p,c)*

import myprosody as mysp

p="Walkers" # Audio File title

c=r"C:\Users\Shahab\Desktop\Mysp" # Path to the Audio\_File directory (Python 3.7)

*mysp*.mysplev(p,c)

[out]

58% accuracy ['c']

65% accuracy ['c']

70% accuracy ['c']

67% accuracy ['c']

64% accuracy ['c']

63% accuracy ['c']

**Development**

MYPROSODY was developed by Mysolution Lab in Japan. It is part of New Generation of Voice Recognition and Acoustic & Language modelling Project in Mysolution Lab. That is planned to enrich the functionality of Myprosody by adding more advanced functions.