

Supplementary Material

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This is KCK_code

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system_nocheck mkdir 음성검사\원파일

system_nocheck mkdir 음성검사\모음_아

system_nocheck mkdir 음성검사\문장

system_nocheck mkdir 음성검사\VOICE_RANGE_PROFILE

system_nocheck mkdir 음성검사\모음_아\결과지

system_nocheck mkdir 음성검사\문장\결과지

system_nocheck mkdir 음성검사\VOICE_RANGE_PROFILE\결과지

form 환자 정보 수집하기

comment 1. 환자정보 입력

word Register_gender_name

endform

Record mono Sound... Mono 44100 untitled

pause 모음/아/, 문장, 글리산도 녹음을 합니다.

select Sound untitled

Rename... 'Register_gender_name\$'

Save as WAV file... 음성검사\원파일\Register_gender_name\$.wav

To TextGrid... 1

plus Sound 'Register_gender_name\$'

Edit

editor TextGrid 'Register_gender_name\$'

pause 경계를 클릭하세요. 분석할 구간의 앞뒤 경계를 넣으세요.

Close

endeditor

elect TextGrid 'Register_gender_name\$'

Set interval text... 1 2 vowel

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Set interval text... 1 4 sent

Set interval text... 1 6 VRP

select TextGrid 'Register_gender_name$'

plus Sound 'Register_gender_name$'

Extract non-empty intervals... 1 no

select Sound vowel

Save as WAV file... 음성검사₩모음_아₩Register_gender_name$'_vowel.wav

select Sound sent

Save as WAV file... 음성검사₩문장₩Register_gender_name$'_sent.wav

select Sound VRP

Save as WAV file... 음성검사₩VOICE_RANGE_PROFILE₩Register_gender_name$'_VRP.wav

select Sound vowel

        start = Get start time

        end = Get end time

Edit

        editor Sound vowel

                Select... start end

                voiceReport$ = Voice report

fileappend .₩음성검사₩모음_아₩결과지₩Register_gender_name$'_vowel.txt 모음/아/분석결과지'newline$'

fileappend                .₩음성검사₩모음_아₩결과지₩Register_gender_name$'_vowel.txt                환자등록번호:'tab$'Register_gender_name$'newline$'
                ...'newline$'

...===== 'newline$'

                ...'newline$'

                ...'voiceReport$'newline$'

...===== 'newline$'

                Close

        endeditor

select Sound sent

        To TextGrid... 1

```

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plus Sound sent
Edit
editor TextGrid sent
    pause 다음 문장 중 분석할 구간을 선정하세요
    Close
endeditor
select TextGrid sent
Set interval text... 1 2 sent_selection
select TextGrid sent
plus Sound sent
Extract non-empty intervals... 1 no
select Sound sent_selection
    start = Get start time
    end = Get end time
    dur_selection = end - start
    select Sound sent_selection
    mean_intensity = Get intensity (dB)
    Edit
    editor Sound sent_selection
        Select... start end
        pitch = Get pitch
        max_pitch = Get maximum pitch
        min_pitch = Get minimum pitch
        range_pitch = max_pitch - min_pitch
        min_intensity = Get minimum intensity
        max_intensity = Get maximum intensity
        range_dB = max_intensity - min_intensity
fileappend .\음성검사\문장\결과지\Register_gender_name$_sent.txt 문장분석결과지'newline$'
fileappend .\음성검사\문장\결과지\Register_gender_name$_sent.txt 환자등록번호:
    ...'tab$'Register_gender_name$'newline$'

```

```

===== 'newline$'
...duration(sec.)'newline$'
===== 'newline$'
..'newline$'
...분석문장길이:'tab$"dur_selection:2'(sec.)'tab$"newline$'
..'newline$'
===== 'newline$'
...pitch(Hz)'newline$'
===== 'newline$'
..'newline$'
...문장평균음도:'tab$"pitch:2'(Hz)'newline$'
...문장최고음도:'tab$"max_pitch:2'(Hz)'newline$'
...문장최저음도:'tab$"min_pitch:2'(Hz)'newline$'
...문장음도범위:'tab$"range_pitch:2'(Hz)'newline$'
..'newline$'
===== 'newline$'
...intensity(dB)'newline$'
===== 'newline$'
..'newline$'
...문장평균강도:'tab$"mean_intensity:2'(dB)'newline$'
...문장최고강도:'tab$"max_intensity:2'(dB)'newline$'
...문장최저강도:'tab$"min_intensity:2'(dB)'newline$'
...문장강도범위:'tab$"range_dB:2'(dB)'newline$'
..'newline$'
===== 'newline$'
Close
endeditor

```

select Sound VRP

To TextGrid... 1

plus Sound VRP

Edit

editor TextGrid VRP

pause 최저와 최고에 앞뒤 2곳 선정해주세요.

Close

endeditor

select TextGrid VRP

Set interval text... 1 2 min

Set interval text... 1 4 max

select TextGrid VRP

plus Sound VRP

Extract non-empty intervals... 1 no

select Sound min

start = Get start time

end = Get end time

mean_intensity1 = Get intensity (dB)

Edit

editor Sound min

Select... start end

min_pitch = Get pitch

#Select... start end

#min_intensity = Get minimum intensity

Close

Endeditor

select Sound max

start = Get start time

end = Get end time

mean_intensity2 = Get intensity (dB)

Edit

editor Sound max

Select... start end

```

max_pitch = Get pitch

fileappend .\음성검사\VOICE_RANGE_PROFILE\결과지\Register_gender_name$_VRP.txt VOICE RANGE PROFILE 결
과지'newline$'

fileappend      .\음성검사\VOICE_RANGE_PROFILE\결과지\Register_gender_name$_VRP.txt      환자등록번
호:'tab$'Register_gender_name$'newline$'

...===== 'newline$'

      ...최저구간'newline$'

...===== 'newline$'

      ...'newline$'

      ...평균음도:'tab$'min_pitch:2'(Hz)'newline$'

      ...평균강도:'tab$'mean_intensity1:2'(dB)'newline$'

      ...'newline$'

...===== 'newline$'

      ...최고구간'newline$'

...===== 'newline$'

      ...'newline$'

      ...평균음도:'tab$'max_pitch:2'(Hz)'newline$'

      ...평균강도:'tab$'mean_intensity2:2'(dB)'newline$'

      ...'newline$'

...===== 'newline$'

      Close

      endeditor

select all

Remove

```