HORNMORPHOA 3.1

Morphological analysis and grapheme-phoneme conversion of Amharic words

Quick Reference

Michael Gasser
Indiana University, School of Informatics and Computing
gasser@indiana.edu
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Installation

1. Uncompress the file that you downloaded. This will yield a directory (folder) called `HornMorphoA-3.1`, which contains all of the files that you need to run HORNMORPHOA.
2. Go to the `HornMorphoA-3.1` directory (folder), and enter the following, making sure that you are running some version of Python 3.

```
python setup.py install
```

Use

STARTING THE PROGRAM

Start up the Python interpreter, again making sure that you are running at least Python 3.1, and type the following to load the program.

```
import hm
```

FUNCTIONS

Options for each function are shown with their default values.

A(*word*)
Options: raw=False

Performs morphological analysis of the word. For ambiguous words returns the first 5 analyses. Analyses are ordered by their estimated frequency. If `raw` is `True`, the raw analysis is returned; otherwise, the analyses is printed out, and nothing is returned.

```
>>> hm.A('የማያስፈልጋትስ')
word: የማያስፈልጋትስ
POS: verb, root: <fl_g>, citation: አስፈለገ
 subject: 3, sing, masc
 object: 3, sing, fem
 grammar: imperfective, causative, relative, definite, negative
 conjunctive suffix: s

>>> hm.A('am', 'አይደለችም')
word: አይደለችም
POS: copula, root: <ne>
 subj: 3, sing, fem
 negative

>>> hm.A('am', 'ለዘመዶቻችንም', raw=True)
[('zemed', [-acc, cnj='m', der=[-ass], -dis, +plr, pos='n',
poss=[+expl, +p1, -p2, +plr], pp='le', rl=[-acc, +p], v=None])]
```

AF(*input_file*)
Options: output_file=None

Runs `A` on the words in a file and writes them to `output_file`, if one is given for `output_file`, otherwise to standard output.

```
>>> hm.AF('hm/languages/am/data/ag.txt',
          'hm/languages/am/data/ag_out.txt')
Analyzing words in hm/languages/am/data/ag.txt
Writing to hm/languages/am/data/ag_out.txt
```

S(*word*)
Options: raw=False

Performs morphological segmentation on the word. Morphemes are separated by '`-`'; stems/ roots appear within '`{}`'. If raw is True, a list of analyses is returned, each a part-of-speech, segmentation pair. For complex words, the part-of-speech is that of the stem or root, not the whole word. If raw is False (the default), the segmentations are printed out, with the part-of-speech appearing before the segmentation, separated by '`:`', and different analyses/segmentations separated by '`;;`'.

```
>>> hm.S('ሲያጭበረብሩን')
ሲያጭበረብሩን -- v:s(cnj1)-y(sb=3sm|3p)-{Cbrbr+a12e3e4_5}(imprf,trans)-
u(sb=2p|3p)-n(ob=1p)

>>> hm.S('ለነገራቸው', raw=True)

[('n', 'le(prep)-{neger}-ac_ew(poss=3p)'), ('v', 'le(prep1)-(rel)-
{ngr+1e2_e3}(prf)-e(sb=3sm)-ac_ew(ob=3p)')]

>>> hm.S("አልማዝ")
```

አልማዝ -- n:{'almaz};;nm_prs:{'almaz}

SF(*input_file*)
Options: output_file=None

Runs S on the words in a file.

```
>>> hm.SF('hm/languages/am/data/ag.txt',
          'hm/languages/am/data/ag_out.txt')
Segmenting words in hm/languages/am/data/ag.txt
Writing to hm/languages/am/data/ag_out.txt
```

P(*word*)
Options: raw=False

Converts a word written in Ge'ez characters to a romanized form that shows consonant gemination and the epenthetic vowel (represented by '*I*'). If multiple pronunciations are possible, they are ordered by estimated frequency. If raw is True, a list of pronunciations is returned; otherwise, each is printed out, separated by spaces.

```
>>> hm.P("ይመታሉ")
yImetal_u yIm_et_al_u

>>> hm.P('እንድነር')
?IndIbIr
```

PF(*input_file*)
Options: output_file=None

Runs P on the words in a file.

```
>>> hm.PF('hm/languages/am/data/ag.txt',
          'hm/languages/am/data/ag_phon.txt')
Analyzing words in hm/languages/am/data/ag.txt
Writing analysis to hm/languages/am/data/ag_phon.txt
```

exit()
Options: none

Exits HornMorpho, saving any analyses or generated forms in a file to be loaded next time you use the program. This will significantly speed up the performance of the program.

```
>>> hm.exit()
```