

Using Python to Build Applications for Language Learning

By Michael Wehar

Word of The Hour (WoTH)

- Multi-platform tool for learning words in multiple languages.
- Every hour a vocabulary word is posted along with English definitions and translations into over a dozen languages.
- Our Goal: Language learning is tough so we strive to provide simple content at regular time intervals to support and motivate language learners.

Supported Platforms

• We currently support over a dozen platforms including Web, Android, iOS, Slack, Roku, Fire TV, Electron, etc.

English: product	Translations
I, the number resulting from the multiplication of two or more numbers	
 anything that is produced, whether as the result of generation, growth, labor, or thought, or by the operation of involuntary causes 	German: das Produkt
3. the number or sum obtained by adding one	
number or quantity to itself as many times as here are units in another number	

ordOfTheHour 1991, Teday at 7:04 PM	
<pre>perinitions 1. to ramble here and there without any certain course</pre>	
or with no definite object in view	
2. to range about; to stroll	
, to go away; to depart	
<pre>catalan: vaga</pre>	
* cornish: gwandra	
dutch: struinen	
english: wander	
esperanto: vagas	
galician: vaga	
german: schlendern	
hebrew: hebrew: hit'ót)	
hindi: भटक	
italian: vagare,girovagare	
• kazakh: қаңғырады	
portuguese: perambular	
spanish: vaga	
• welsh: crwydro	
Provided by https://wordofthehour.org and	
/r/Word_of_The_Hour	

4	3
ord of The Hour : A platform fo arning words in multiple langu	
rrent Word: alive	
Sections	
having life, in opposition to dead	
being in a state in which the organs perform their fur	scions
in a state of action	
enalations	
sding Languages	
Catalan: viv	
Esperants: vius	
French wit	
Galician vivo	
Germant lebersd	
Italian: vivo	
Japanese: 法方てる/い方でる	
Portuguese: eliro	
Spanish: vivo	
Welah; yn fyw	
e Languages	
BCS: 3W	
Bengak diStra	
Cornials: byw	
Dutuh: invent	
Firmish: elunza, terupanà	
Heads Tilter	
Kazakh: res	
Malay (wasih) hidup	

11:03		🗢 🖿
	WotH	Ċ
	sculpture	
into statues, ornam things	, cutting, or hewing wood ents, etc., or into figures, producing figures and gr	as of men, or other
assamese		ভাস্কৰ্য
bcs		kip
bengali		মূর্তি
catalan		escultura
esperanto		skulptaĵo
french		sculpture
galician		escultura
german		plastik
hindi		मूर्तिकला
italian		scultura
kazakh		мүсін
portuguese		escultura
spanish		escultura
swedish		skulptur

How Do We Use Python?

- Word Selection: process data on over 200,000 words and run statistical analyses to select words to be featured by WoTH
- **Crowdsourcing Translations:** scrape Google Sheets where users have submitted over 35,000 crowdsourced translations
- Social Media Posts: posting language content to relevant social media platforms for interested language learners

FileIO	Dictionaries
Sorting	Regex

Word Selection

- Start with data on over 200,000 words
- Generate relevant word features, then carry out ranking and filtering processes
- Word features based on frequency, dependency, context

FileIO	Request
Filtering	Git

Crowdsourcing

- Support crowdsourcing translations for 40 languages
- Received over 35,000 crowdsourced translations
- Significant efforts to support Portuguese and Cornish!

Input Args	Format Post
Social Media API	WoTH API

Social Media Posts

- Posts words along with translations to over 30 different social media pages every hour
- Uses an API for each social media platform
- Uses the WoTH API or direct endpoints to get current word

WoTH API for Python (see on <u>GitHub</u>)

- Enables Python developers to include the current Word of The Hour along with its English definitions and translations within their apps.
- Clone our <u>repo</u> and then import the WothAPI.
- Simply call WothAPI.fetch() to get the current data!
 - fetch() returns a dictionary containing values associated with the keys: "word", "definitions", and "translations".

(WoTH API Demo)

Thank You!