Using Python to Build Applications for Language Learning
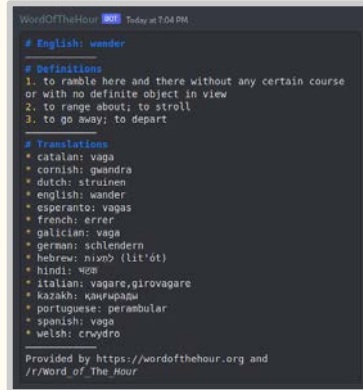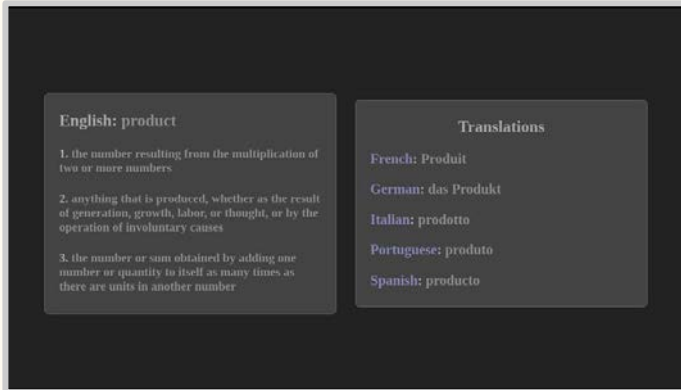
By Michael Wehar

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.

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 GitHub)

- Enables Python developers to include the current Word of The Hour along with its English definitions and translations within their apps.

- Clone our repo 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!