

CS-483: Wikipedia Scraping

Grant Wade (grant@gwade.co)

August 15th, 2017

Overview:

The goal of this project was to use the Wikipedia API to request data on a topic that we want to learn about. The topic that I decided to work with was *Linux software*. I think this could be an interesting topic to work with because there is such a multitude of tools that can be used in a Linux system; it can be hard to find the exact one you are looking for. I'm hoping with this database it will be possible to create an easy way to lookup different sub-categories of *Linux software* to potentially find software that will be useful, or interesting to work with. It is a very broad category that has a total of 6846 pages and 1833 images at the time of retrieval. A portion of these pages don't have data that applies to the topic because of how broad a lot of the Wikipedia categories can be.

How it's done:

To start off with the script needs a category to begin its searching at. Then it recursively collects all titles of pages in the category and each sub-category until it has collected every title. There checks in place to make sure it doesn't end up in a endless loop of categories. After retrieval of titles duplicates are removed, and the data collection begins. First, a summary of the page is retrieved, then all the categories that page is in, then an image URL if one exists on the page, then the page view count, and lastly the images are downloaded into a directory for later use. Once all the data is collected an SQLite database is created and all the data is placed into a table with the title of the page being the key, since each Wikipedia page title is unique.

Example:

This is the small example that is built into the wikipedia-scraping.py script that will collect all the pages in the category Office suites for Linux and then retrieves the summary, categories, and a picture if one is found then puts all that data in the database wiki-scraping.db under the table Office suites for Linux.

```
[→ python wikipedia-scraping.py
Starting (using default value):
Getting all titles from given category:
    - Calligra Suite
    - LibreOffice
    - OpenOffice
Pages found: 43
Getting a summary from every page:
43 / 43
Getting total page views in the last 60 days:
43 / 43
Getting all the categories from the pages:
43 / 43
Creating image directory:
Getting image url from each page if it exists:
43 / 43
Downloading images into Images folder:
21 / 21
Getting an url for each title
Initialize database and adding data:
Finished adding data:
```