
ArchMap Documentation

Release

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The ArchMap project creates a map of Arch Linux users all over the world.

In this section:

- *ArchMap*
- *Synopsis*
- *Use*
- *License*
- *External links*

1.1 ArchMap

archmap generates *GeoJSON* and *KML* files which can be used to display a map of Arch Linux users, it does this by parsing data from the [ArchWiki](#).

One rendering of the data is on a map over at [mapbox.com](#) - This is updated manually so it may be out of date.

Have a look at the [ArchMap](#) page on the ArchWiki for more information about this project.

The documentation is hosted by [readthedocs.org](#).

1.2 Synopsis

By default, running `archmap` will output three files to `/tmp`, `archmap_users.txt`, `archmap.geojson` and `archmap.kml`, this can be overridden by either using the config file or by the command line switches.

The config file should be placed in `/etc/archmap.conf`, this can be overridden by using `--config <path-to-config-file>`

1.3 Use

Running `archmap --help` will display this help message:

```
archmap [-h] [-v] [--config FILE] [--users FILE] [--geojson FILE] [--kml FILE] [--csv FILE]
optional arguments:
-h, --help          show this help message and exit
```

```
-v, --verbose      Show info messages
--config FILE     Use an alternative configuration file instead of /etc/archmap.conf
--users FILE      Use FILE for a list of users instead of getting the list from the ArchWiki
--geojson FILE    Output the GeoJSON to FILE, use 'no' to disable output
--kml FILE        Output the KML to FILE, use 'no' to disable output
--csv FILE        Output the CSV to FILE, use 'no' to disable output
```

1.4 License

Everything in the [ArchMap repo](#) is unlicensed.

All of the files that this script can generate (`archmap_users.txt`, `archmap.geojson`, `archmap.kml`, and `archmap.csv`) will contain text from the [ArchWiki](#) which puts them under the [GNU Free Documentation License 1.3 or later](#).

1.4.1 Unlicense

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1.5 External links

1.5.1 Protect info

- Project page on the ArchWiki - <https://wiki.archlinux.org/index.php/ArchMap>
- Project talk on the Arch forums - <https://bbs.archlinux.org/viewtopic.php?id=22518>
- Arch Women wiki page - <https://archwomen.org/wiki/aw-tech:archmap>

1.5.2 Data

- The list of user data - <https://wiki.archlinux.org/index.php/ArchMap/List>
- Pre-generated *GeoJSON*, *KML* and *CSV* files - <https://archwomen.org/media/archmap/>

1.5.3 Code

- Repository on GitHub - <https://github.com/maelstrom59/ArchMap>
- Stats on Ohloh - <https://www.ohloh.net/p/ArchMap>
- Code search on sourcegraph.com <https://sourcegraph.com/github.com/maelstrom59/ArchMap>

In this section:

- *System Requirements*
- *How-to*
- *Support*
- *Release Notes*

2.1 System Requirements

Python 3.4 - If your running Arch, this shouldn't be a problem!

- `geojson`
- `simplekml`

2.2 How-to

See also: *Packaging*

2.2.1 Manual git install

This will make a directory `ArchMap/` with a link to `archmap` in it. It uses *git* and *pip* to resolve the dependencies.

Download this script:

```
echo -e "==> Make and cd to ./ArchMap\n"
mkdir ArchMap && cd ArchMap

echo -e "\n\n==> Download the ArchMap repo from GitHub\n"
git clone https://github.com/maelstrom59/ArchMap.git ArchMap-git

echo -e "\n\n==> Install the required packages\n"
pip3 install -r ArchMap-git/requirements.txt

echo -e "\n\n==> Make an easy link to archmap.py\n"
cd ../ && ln -s ArchMap-git/archmap.py ./archmap
```

```
echo -e "\n\n==> Test by printing the help message\n"
./archmap --help
```

2.3 Support

External links

2.4 Release Notes

See also: [Releases on GitHub](#)

If you would just like to get up and running, have a look at:

3.1 Examples

All of these examples assume you have installed **archmap** via pacman or pip, if you would like to use the script directly, just use `./archmap.py`.

3.1.1 Help

The `-help` flag will output a help message with all of the available options:

```
archmap --help
```

3.1.2 Basic use

By default, running **archmap** will output three files to `/tmp`, **archmap_users.txt**, **archmap.geojson** and **archmap.kml**, this can be overridden by either using the config file or by the following command line switches.

Using the `-verbose` flag will print information on what the script is doing:

```
archmap --verbose
```

You can specify the output location for the GeoJSON, KML and CSV:

```
archmap --geojson /tmp/archmap.geojson --kml /tmp/archmap.kml --csv /tmp/archmap.csv
```

3.1.3 Logging

If the script is run on a system that uses systemd, it will log to it using the syslog identifier - "archmap".

You can review all logs generated by **archmap** by using:

```
journalctl SYSLOG_IDENTIFIER=archmap
```

If you would like to use any of this code, have a look at:

3.2 Use the code

3.2.1 Logging

`archmap.message` (*message*, *verbosity*, *systemd=False*)

This function is used by others for message printing.

Parameters

- **message** (*string*) – The text used for logging messages.
- **verbosity** (*int*) – If set to be ≥ 1 it will print out the string passed to `message()`
- **systemd** (*bool*) – If not `False` (the system uses the `systemd` journal), it will log to it using `message`.

3.2.2 Getting and parsing user data

`archmap.get_users` (*output_file*, *verbosity*)

This function parses users from the ArchWiki and writes it to `output_file`

Parameters

- **output_file** (*open*) – Location to save the raw user data from the ArchWiki
- **verbosity** (*int*) – If set to be ≥ 1 it will print out the string passed to `message()`

`archmap.parse_users` (*users_file*, *verbosity*)

This function parses the wiki text from `users_file` into its components.

Parameters

- **users_file** (*open*) – Raw user data from the ArchWiki
- **verbosity** (*int*) – If set to be ≥ 1 it will print out the string passed to `message()`

Returns A list of lists, each `sub_list` has 4 elements: [`latitude`, `longitude`, `name`, `comment`]

Return type `list`

3.2.3 Output generators

`archmap.make_geojson` (*parsed_users*, *output_file*, *verbosity*)

This function reads the user data supplied by `parsed_users`, it then generates GeoJSON output and writes it to `output_file`.

Parameters

- **parsed_users** (*list*) – A list of lists, each `sub_list` should have 4 elements: [`latitude`, `longitude`, `name`, `comment`]
- **output_file** (*open*) – Location to save the GeoJSON output
- **verbosity** (*int*) – If set to be ≥ 1 it will print out the string passed to `message()`

`archmap.make_kml` (*parsed_users*, *output_file*, *verbosity*)

This function reads the user data supplied by `parsed_users`, it then generates KML output and writes it to `output_file`.

Parameters

- **parsed_users** (*list*) – A list of lists, each sub_list should have 4 elements: [latitude, longitude, name, comment]
- **output_file** (*open*) – Location to save the KML output
- **verbosity** (*int*) – If set to be ≥ 1 it will print out the string passed to `message()`

`archmap.make_csv(parsed_users, output_file, verbosity)`

This function reads the user data supplied by `parsed_users`, it then generates CSV output and writes it to `output_file`.

Parameters

- **parsed_users** (*list*) – A list of lists, each sub_list should have 4 elements: [latitude, longitude, name, comment]
- **output_file** (*open*) – Location to save the CSV output
- **verbosity** (*int*) – If set to be ≥ 1 it will print out the string passed to `message()`

Contribute

In this section:

- *Roadmap*
- *Contributing*
- *Development*
 - *System Requirements*
 - *Documentation*
 - *Testing*
 - *Packaging*

4.1 Roadmap

- Add more tests
- Work on packaging
- Use GitHub pages to build a homepage
 - Use [Leaflet](#) to get and display coords on a ...
 - [MapBox](#) map

4.2 Contributing

Contributions are always welcome! Here are a few ways you could contribute:

- Bug fixes
- New tests
- New features
- Testing on different platforms
- Documentation

Support: [External links](#)

4.3 Development

All of the following commands assume you are starting in the root ArchMap directory.

4.3.1 System Requirements

In addition to the *System Requirements* for the install, the following packages are required:

- To generate these docs:
 - sphinx
- For packaging:
 - setuptools
 - wheel (optional) - for building *wheels*

4.3.2 Documentation

Sphinx can be used to build a variety of formats.

First, make sure you're in the docs directory:

```
cd docs/
```

Make the preferred output:

```
make html
```

Open the the index page in your browser:

```
firefox _build/html/index.html
```

4.3.3 Testing

unittest is used for testing:

```
python setup.py test
```

This will search the `tests` directory for tests.

See also:

- [unittest - Python docs](#)

4.3.4 Packaging

ArchMap is currently packaged in two forms.

Arch Linux package

Packages are built using the `PKGBUILD` and `archmap.install` for settings.

To build package using the `PKGBUILD`:

```
cd pkgbuild
makepkg PKGBUILD
```

Related issues:

- [#3 PKGBUILD - Closed](#)
- [#9 PKGBUILD: Update pkgbuild with new deps and manpage - Closed](#)

See also:

- [Creating packages](#)
- [Python Package Guidelines](#)

Python package

Packages are built using `setup.py` and `setup.cfg` for settings.

To build a [source distribution](#):

```
python setup.py sdist
```

To build a [wheel](#):

```
python setup.py bdist_wheel
```

Related issues:

- [#8 Build a python package - Open](#)

See also:

- [Installation & Packaging Tutorial](#)

Indices and tables

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- `modindex`
- `search`

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