
Distill Documentation

Release 1.0

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USER'S GUIDE

Entire documentation of Distill lives here. Provides step by step instructions to install and deploy Distill in a development and production environment. Including is a API reference portal and quickstart guide.

1.1 Installing Distill

The first step to getting going is installing Distill. Distill is a python project, so it can be installed like any other python library. Several Operating Systems (Mac OS X, Major Versions of Linux/BSD) have Python pre-installed, so you should just have to run:

```
$ easy_install distill
```

Advanced users can install this in a virtualenv if they wish.

When the package is installed via `easy_install` or `pip` this function will be bound to the `distill` executable in the Python installation's `bin` directory (on Windows - the `Scripts` directory).

1.1.1 Development and Testing

To build the source code and run all unit tests:

```
$ python setup.py develop test
```

To start up a local web server, running on localhost:8090:

```
$ dev
```

1.1.2 Distill Deployment

I will describe a setup with nginx as a web server on Ubuntu. A web server cannot communicate directly with a Flask application such as Distill, that's why gunicorn will be used to act as a medium between the web server and Distill. Gunicorn is like an application web server that will be running behind nginx, and it is WSGI compatible. It can communicate with applications that support WSGI – Flask, Django, etc.

Install requirements:

```
$ sudo apt-get update  
$ sudo apt-get install -y python python-pip nginx gunicorn
```

Create a directory to store the project:

```
$ sudo mkdir /home/public_html && cd /home/public_html
```

Download the project from the GitHub repository and copy the application to the home/www directory:

```
$ git clone https://github.com/draperlaboratory/distill.git /home/public_html
```

Install Distill's requirements:

```
$ pip install -r requirements.txt
```

Distill has provided an nginx configuration file located in `distill/deploy/nginx.conf`.

Gunicorn will use port 8000 and handle the incoming HTTP requests.

Restart nginx to load the configuration changes:

```
$ sudo /etc/init.d/nginx restart
```

Run gunicorn on port 8000:

```
$ gunicorn --workers 4 --bind unix:distill.sock -m 007 deploy/run_server:app
```

Start a new browser instance and navigate to:

```
$ http://server_address
```

1.1.3 Building Documentation

To build Distill's documentation:

```
$ python setup.py build_sphinx
```

Or:

```
# Inside top-level docs/ directory.  
$ make html
```

This should build the documentation in your shell, and output HTML. At then end, it should say something about documents being ready in `_build/html`. You can now open them in your browser by typing:

```
$ open _build/html/index.html
```

1.2 Quickstart

1.2.1 Usage

Using curl:

```
$ curl -XGET 'http://localhost:8090/app/register' -d '{  
    "application_name" : "my_app",  
    "version" : "0.1",  
    "application_description" : "my test app"  
}'
```

API REFERENCE

2.1 API

2.2 distill package

2.2.1 Subpackages

distill.algorithms package

Subpackages

distill.algorithms.graphs package

Subpackages

distill.algorithms.graphs.tests package

Module contents distill: tests module.

Meant for use with py.test. Organize tests into files, each named xxx_test.py Read more here: <http://pytest.org/>

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Module contents distill: tests module.

Meant for use with py.test. Organize tests into files, each named xxx_test.py Read more here: <http://pytest.org/>

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distill.algorithms.stats package

Subpackages

distill.algorithms.stats.tests package

Module contents distill: tests module.

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distill.algorithms.tests package

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distill: tests module.

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distill.deploy package

Submodules

distill.deploy.run_server module

distill: Development Server scripts.

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```
distill.deploy.run_server.dev_server()
```

Module contents

distill.models package

Subpackages

distill.models.tests package

Module contents distill: tests module.

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Submodules

distill.models.stout module

distill: This package contains a flask app RESTful api for distill

This flask app exposes some restful api endpoints for querying User-ALE. Very similar to Lucene syntax for basic query operations.

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```
class distill.models.stout.Stout
    Bases: object

    static ingest ()

class distill.models.stout.StoutDoc (meta=None, **kwargs)
    Bases: elasticsearch_dsl.document.DocType

    get_model_obj ()

    save (*args, **kwargs)

    classmethod sync (stout)

distill.models.stout.parse ()
```

distill.models.userale module

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```
class distill.models.userale.UserAle
    Bases: object

    Get Status of Elasticsearch Instance, show all applications registered and the number of logs in each application
    (based on doc_type). Example: {

        "author" : "Michelle Beard", "email" : "mbeard@draper.com", "name": "Distill", "status" : true,
        "version" : "1.0", "apps" : {

            "xdata_v3" [{] testing: 205, parsed: 500,

            }, "test_app" : {

                logs: 500, parsed: 100,

            }

        }

    }

    static create (app)

    static delete (app)

    static denoise (app, doc_type='parsed', save=False)

    static getApps ()
```

```
    static getStatus ()
    static read (app)
    static select (app, app_type=None, params=None)
    static update (app)
class distill.models.userale.UserAleParsedDoc (meta=None, **kwargs)
    Bases: elasticsearch_dsl.document.DocType
    save (**kwargs)
distill.models.userale.get_all_fields (app, app_type=None)
distill.models.userale.get_cluster_status (app)
distill.models.userale.merge_dicts (lst)
distill.models.userale.parse_mappings (app, app_type=None)
distill.models.userale.parse_query_parameters (indx, app_type=None, request_args={})
```

Module contents

distill: tests module.

Meant for use with py.test. Organize tests into files, each named xxx_test.py Read more here: <http://pytest.org/>

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distill.tests package

Submodules

distill.tests.basic_test module

distill: Test module.

Meant for use with py.test. Write each test as a function named test_<something>. Read more here: <http://pytest.org/>

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```
distill.tests.basic_test.test_example ()
```

distill.tests.distill_test module

```
distill.tests.distill_test.test_example ()
```

Module contents

distill: tests module.

Meant for use with py.test. Organize tests into files, each named xxx_test.py Read more here: <http://pytest.org/>

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distill.utils package

Subpackages

distill.utils.tests package

Module contents distill: tests module.

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Module contents

distill: tests module.

Meant for use with py.test. Organize tests into files, each named xxx_test.py Read more here: <http://pytest.org/>

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2.2.2 Submodules

2.2.3 distill.app module

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This flask app exposes some restful api endpoints for querying User-ALE. Very similar to Lucene syntax for basic query operations.

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```
distill.app.create (app_id)
```

```
distill.app.delete (app_id)
```

```
distill.app.denoise (app_id)
```

```
distill.app.index ()  
    curl -XGET https://{hostname}:{port]
```

Example: curl -XGET https://{hostname}:{port]

Show Distill version information, connection status, and all registered applications.

```
distill.app.merge_stout ()
```

```
distill.app.page_not_found (error)
```

```
distill.app.search (app_id, app_type)
```

```
distill.app.stat (app_id, app_type)
```

```
distill.app.status (app_id)
```

```
distill.app.update (app_id)
```

2.2.4 distill.exceptions module

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exception `distill.exceptions.ValidationError`

Bases: `exceptions.Exception`

2.2.5 distill.validation module

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`distill.validation.str2bool(v)`

`distill.validation.validate_request(q)`

2.2.6 Module contents

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ADDITIONAL NOTES

Design notes, legal information and changelog are here.

3.1 Distill Changelog

Here you can see the full list of changes between each Distill release.

3.1.1 Version 1.0

- Initial version.

3.2 License

Distill is licensed under Apache License.

The full license text can be found below (distill-license).

3.2.1 Authors

Distill is written and maintained by Michelle Beard and various contributors:

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- Clay Gimenez <cgimenez@draper.com>
- Steven York <syork@draper.com>

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Version 2.0, January 2004

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