RENKU CHEATSHEET

Typical Workflow

```
$ git status
```

Take a look at what you have done since the last save.

```
$ renku save -m <msg>
```

Save your latest work, providing a message explaining what you have done.

```
$ renku run …
```

Run your code, capturing lineage of the inputs and outputs using Renku.

Getting Started

```
$ pip install renku
```

Install with pip

```
$ renku init my-renku-project
$ cd my-renku-project
```

Starting a Renku project.

Project Templates

```
$ renku template ls
```

List available Renku templates.

```
$ renku template show <template>
```

Show detailed information for the given template.

```
$ renku template update
```

Update the project's template if a newer version is available.

```
$ renku template set <template>
```

Replace the project's template with the given template.

Working with Renku Datasets

```
$ renku dataset create <dataset>
```

Create a new dataset called <dataset>.

```
$ renku dataset ls
```

List all datasets in the project.

```
$ renku dataset rm <dataset>
```

Remove a dataset.

```
$ renku dataset add <dataset> <url>
```

Add data from <url> to a dataset. <url> can be a local file path, an http(s) address or a Git git+http or git+ssh repository.

```
$ renku dataset add <dataset> --source <path>
[--destination <rel-path>] <git-url>
```

Add only data in <path> from Git. With –destination: location the data is copied to.

```
$ renku dataset update <dataset>
```

Update files in a dataset based on their source.

```
$ renku dataset tag <dataset> <tag> [-d <desc>]
```

Add a tag to the current version of the dataset, with description <desc>.

```
$ renku dataset ls-tags <dataset>
```

List all tags for a dataset.

```
$ renku dataset rm-tags <dataset> <tags...>
```

Remove tags from a dataset.

```
$ renku dataset import <uri>
```

Import a dataset. <uri> can be a Renku, Zenodo or Dataverse URL or DOI.

```
$ renku dataset export <dataset> <provider>
```

Export the dataset <dataset> to <provider>. Providers: Zenodo, Dataverse.

```
$ renku dataset ls-files
```

List all dataset files in project.

```
$ renku dataset unlink <dataset> [--include
<path|pattern>]
```

Remove files from a dataset.

Running

```
$ renku rerun <path>
```

Recreate the file(s) <path> by rerunning the commands that created them.

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```
$ renku run --name <name> <command> [--input
<in_file>...] [--output <out_file>...]
```

Execute a <command> with Renku tracking inputs and outputs. Input and output files are automatically detected from the command string. Creates a workflow template named <name>. With –input and/or –output: Manually specify input or output files to track.

```
$ renku run --name <name> <command> --no-output
```

Run a <command> that produces no output.

```
$ renku status
```

The the status of generated output files in the project.

```
$ renku update [--all] [<path>...]
```

Update outdated output files created by renku run. With <path>'s: Only recreate these files. With –all: Update all outdated output files.

Workflows

```
$ renku workflow ls
```

List Plans (workflow templates).

```
$ renku workflow show <name>
```

Show details for Plan <name>.

```
$ renku workflow execute --provider <provider>
[--set <param-name>=<value>...] <name>
```

Execute a Plan using <provider> as a backend, overriding parameter <param-name>'s value.

```
$ renku workflow iterate [--map
<param-name>=[value,value,...]] <name>
```

Repeatedly execute a Plan, taking values from the list specified with –map.

```
$ renku workflow export --format <format> <plan>
```

Export a Plan in a given format (e.g. 'cwl').

```
$ renku workflow compose <composed-name> <plan>
<plan>
```

Create a new Plan composed of child Plans.

```
$ renku workflow edit <plan>
```

Create a new Plan composed of child Plans.

```
$ renku workflow delete <plan>
```

Remove a Plan.

```
$ renku workflow visualize [--interactive]
```

Show linked workflows as a graph.

```
$ renku workflow revert <activity ID>
```

Undo a Run.

```
$ renku workflow inputs
$ renku workflow outputs
```

Show input respectively output files used by workflows.

Managing Interactive Sessions

```
$ renku session start --provider renkulab
```

Start an interactive session on the remote Renku deployment.

```
$ renku session ls
```

List all active sessions.

```
$ renku session open <name>
```

Open a browser tab and connect to a running session.

```
$ renku session stop <name>
```

Stop the specified session.

Config

```
$ renku config show [<key>]
```

Show current configuration.

```
$ renku config set <key> <value>
```

Set entry <key> to <value> in renku config.

```
$ renku config remove <key>
```

Unset entry <key> renku config.

Misc

```
$ renku doctor
```

Check your system and repository for potential problems.

```
$ renku gc
```

Free up disk space used for caches and temporary files.

```
$ renku log
```

Show a history of renku actions.

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```
$ renku login --endpoint <URL>
```

Login to a Renku deployment for accessing private projects and dataset.

```
$ renku logout --endpoint <URL>
```

Logout from a Renku deployment and clear locally-stored credentials.

```
$ renku migrate
```

Migrate old metadata to the current Renku version.

```
$ renku mv <path>... <destination>
```

Safely move files within a project.

```
$ renku rm <path>...
```

Safely delete files from a project.

```
$ renku save [-m <message>]
```

Save (commit) and push all local changes. with optional message.

```
$ renku storage pull <path>...
```

Pull <path>'s from external storage (LFS).

```
$ renku template validate
```

Check a template repository for possible errors (useful when creating Renku templates).

Undo Renku Command

```
$ renku rollback
```

Rollback project to a previous point in time.

Configuration Options

- **registry**: Docker image registry
- **zenodo.access_token**: Token for Zenodo export
- **dataverse.access_token**: Token for Dataverse export
- **show_lfs_message**: Whether to show the LFS warning message
- **lfs_threshold**: Size threshold below which files aren't added to LFS

Resources

Public instance of Renku:
`https://renkulab.io/`
Github:
`https://github.com/SwissDataScienceCenter/renku`
Documentation:
`https://renku.readthedocs.io/en/latest/`
Renku-Python Documentation:
`https://renku-python.readthedocs.io/en/latest/`
SDSC:
`https://datascience.ch/`

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