

How to Maintain Many, Many, Many, Many... Many Git Repositories?

Jürgen Gmach

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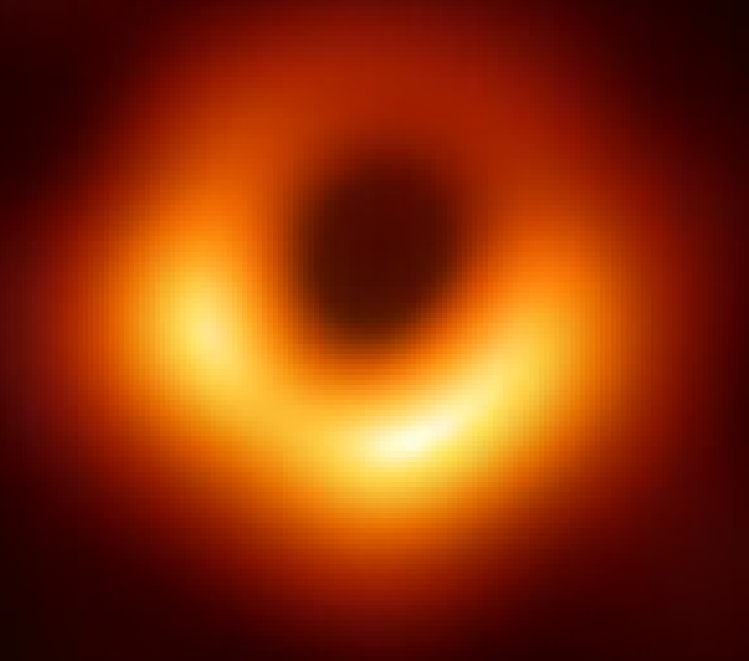
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 <https://jugmac00.github.io/>

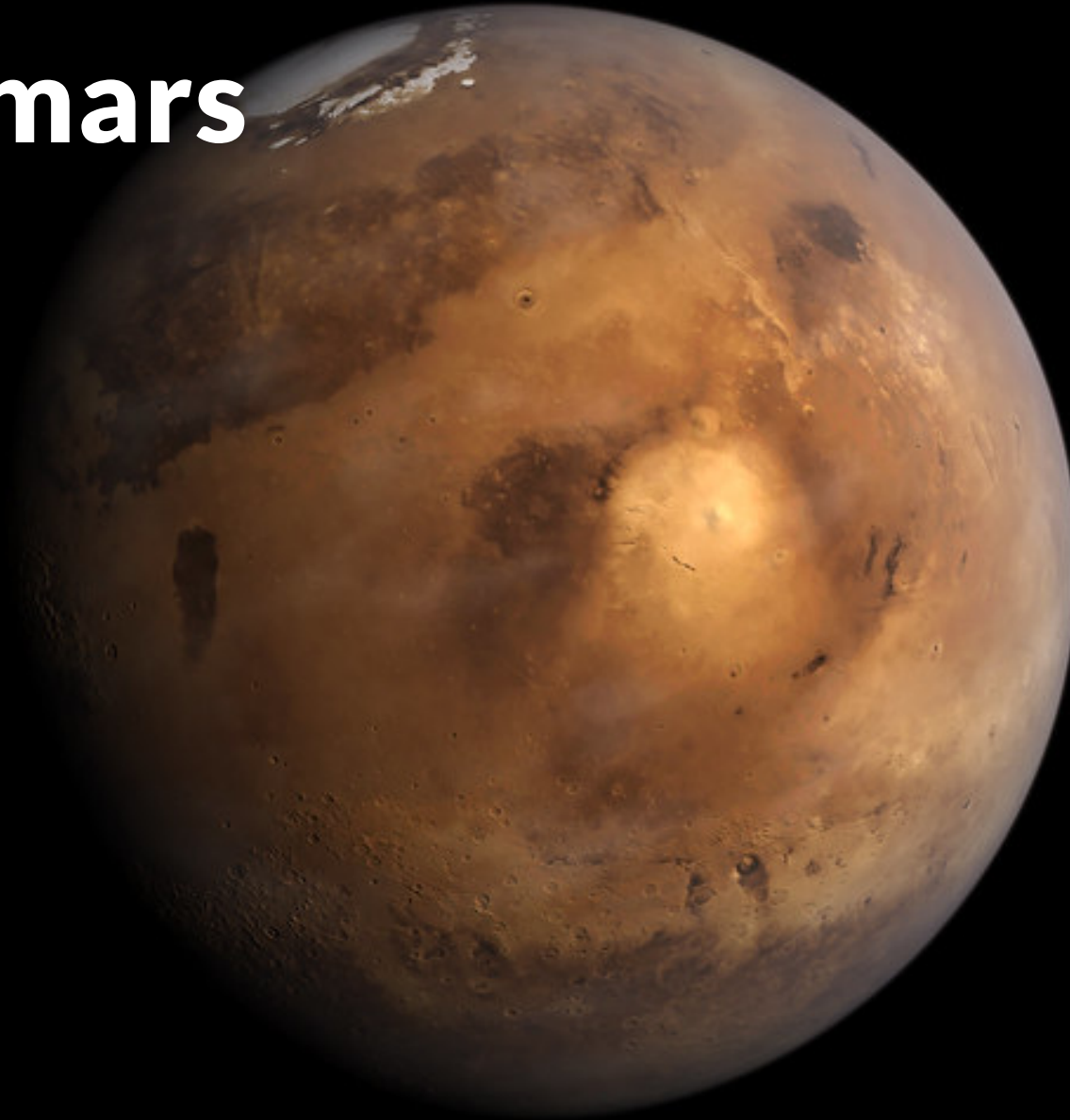
become an open source rock star



take photos of black holes



fly to the mars



join an open source project



Joined the Zope organization

on Oct 1



Zope

first task

- **me:** Python 3.9 final is available!!
- **core:** Thank you for this info.
- **core:** We do not have the infrastructure to automatically switch from 3.9-dev to 3.9.
- **core:** Please apply the updates manually to all of our 300 repositories.
- **me:** <faints>

all-repos to the rescue



written by Anthony Sottile



installation

```
> pip install --user all-repos  
> pipx install all-repos  
> virtualenv venv  
> venv/bin/pip install all-repos  
...
```

configuration

`all-repos.json`

```
{
  "output_dir": "output_zope",
  "source": "all_repos.source.github_org",
  "source_settings": {
    "api_key": "xxxxxxxxxxxxxxxxxxxxxxxxxxxx",
    "org": "zopefoundation" },
  "push": "all_repos.push.github_pull_request",
  "push_settings": {
    "api_key": "xxxxxxxxxxxxxxxxxxxxxxxxxxxx",
    "username": "jugmac00" }
}
```

all-repos-clone

```
> all-repos-clone  
  
# or  
  
> all-repos-clone -C path-to-config.json
```

Notes

- use this command to update the repositories
- this will delete unpushed work!

all-repos-find-files

```
> all-repos-find-files [options] PATTERN
```

```
# or
```

```
> all-repos-find-files -C path-to-config.json PATTERN
```


all-repos-find-files

find all repositories which use `tox`

```
> all-repos-find-files tox.ini
```

```
> all-repos-find-files tox.ini | wc -l  
277
```

Do you want to contribute to open source?

Work on test setup/CI is a **valuable** contribution!

all-repos-grep

```
> all-repos-grep [options] [GIT_GREP_OPTIONS]
```

all-repos-grep

takes long

```
> all-repos-grep "python -m unittest.discover"
```

much faster

```
> all-repos-grep "python -m unittest.discover" -- 'tox.ini'
```

```
output_zope/zopefoundation/zope.component:tox.ini:    python -m unittest discover -s src  
output_zope/zopefoundation/zope.configuration:tox.ini:    python -m unittest discover -s src
```

all-repos-list-repos

```
> all-repos-list-repos [options]
```


all-repos-list-repos

list all repos which do not use a src directory

```
> all-repos-list-repos --output-paths \  
  -C all-repos-zope.json \  
  | xargs --replace \  
  bash -c 'ls {}/src >& /dev/null || echo {}'
```

```
output_zope/zopefoundation/persistent  
output_zope/zopefoundation/zope.publisher  
output_zope/zopefoundation/ZConfig  
output_zope/zopefoundation/zc.zdaemonrecipe  
output_zope/zopefoundation/zopetoolkit  
...
```

all-repos-sed

```
> all-repos-sed [options] EXPRESSION FILENAMES
```

all-repos-sed

```
> all-repos-sed \  
  --commit-msg 'Use Python 3.9 final' \  
  's/3.9-dev/3.9/g' \  
  -- '.travis.yml'
```

bonus

use `all-repos` as a library!!!

```
from all_repos import cli
from all_repos.config import load_config

def main(argv: Optional[Sequence[str]] = None) -> int:
    ...

    for i, repo in enumerate(list(config.get_cloned_repos())):
        ...
        run = subprocess.run(["tox4", "-c", path_tox])
```


Thank you!

Anthony Sottile

<https://github.com/asottile/all-repos>

Yuki Hattori

<https://github.com/marp-team/marp>

Thank you!

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Thank you!

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