Github pages for open and FAIR teaching material

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Open and FAIR teaching material

- Open:
  - Transparancy
  - Reproducibility
- FAIR:
  - Findable
  - Accessible
  - Interoperable
  - Reusable

Findable material

- Assigned to a unique and persistent identifier

- Searchable resource

- **Persistance and searchability are hard to accomplish even by a large organization**

Accesible material

- Standardized communications protocol
- Open and free
- **Proprietary/in-house developed tools can limit availability**

Interoperable material

- Broadly applicable language
- **The language/format of e.g. pdfs/word files is not easy to modularize**

Reusable

- Clear and accesible license
- Domain-relevant standards
- **Where to communicate licenses, and how to re-use course material?**

Other issues

- Co-development of course material, independent of individuals
- Maintaining versions and releases
- Store and document code/material in one place
- Reporting mistakes/issues by the community

A set of solutions

- Exercises and text material written in a universal mark up language (i.e. plain text) **[markdown]**

- Use version control **[git]**

- Store course material in a single repository **[github]**

- Make use of resources that are there for persistence and identity **[Zenodo]**

Github pages + mkdocs

- Directly deploy a website from a repository containing structured markdown files
- Functional and esthetic

The tools

- `markdown`: unified markup language for texts

- `mkdocs`: render a set of structured markdown files into a website

- `git`: version control

- `github`: remote storage of a git repository + website hosting

- `zenodo`: persistent storage