



Software
Sustainability
Institute

SSI FELLOWSHIP APPLICATION 2019

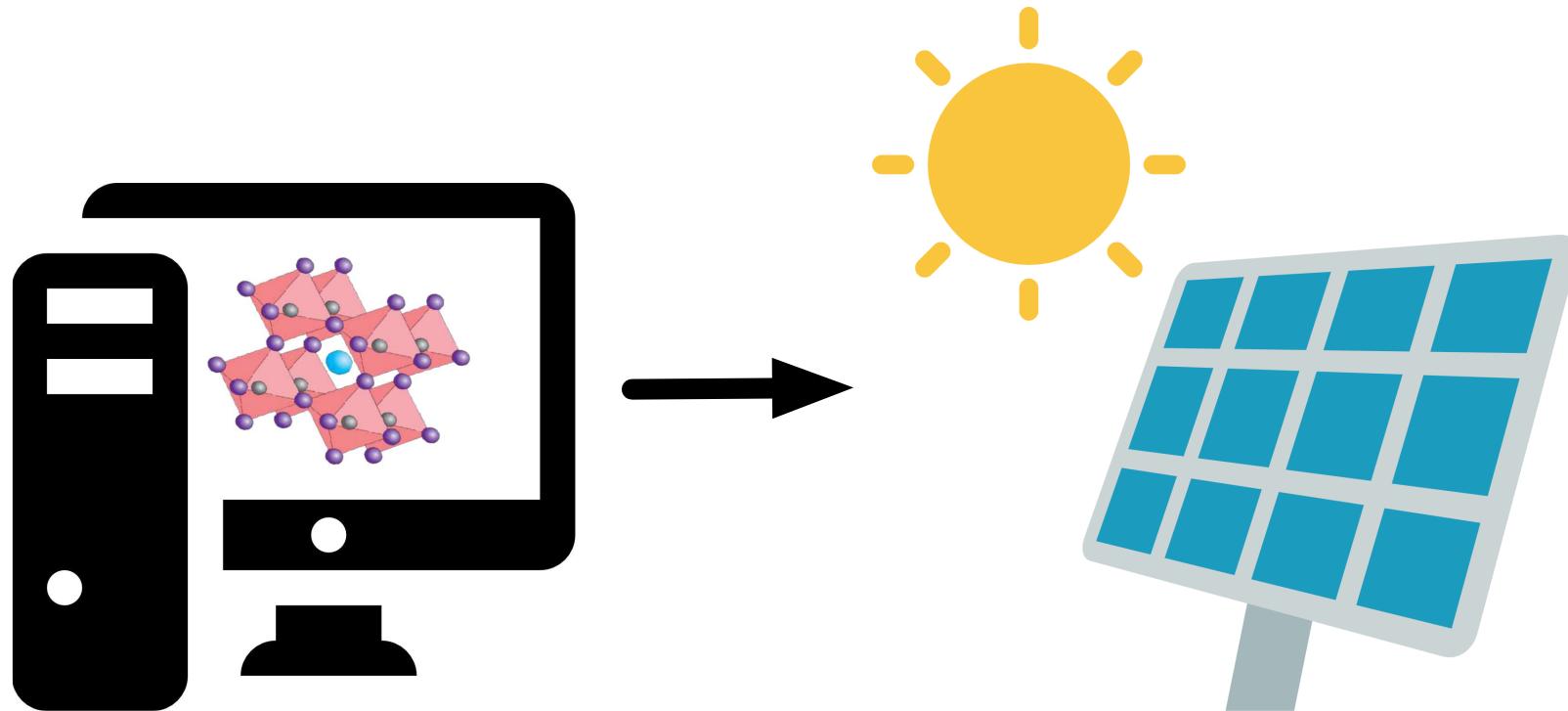
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lucydot.github.io/slides



**Who are
you?**

RESEARCHER



Objective: to optimise and design new materials for
energy generation and storage

SOFTWARE..

USER

- code optimised for high performance computing,
eg: [vasp_gpu](#)

DEVELOPER

- post-processing software, eg: [effmass](#)
- Python (NumPy, SciPy, Pandas, pytest), bash, Julia
- I try to work openly: lucydot.github.io/open

TEACHER



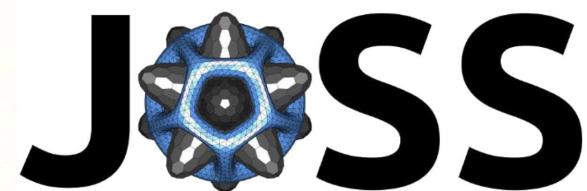
O **r**t. art and community café



**What do
you do?**

I LEARN

- Conferences in 2018: RSE, CarpentryCon, MozFest
- The Journal of Open Source Software: author and reviewer



I FACILITATE

- I teach programming skills: git, bash, Python
- I develop teaching materials: [Pandas mini workshop](#)
- I organise workshops: Python workshop for PhD students

I ADVOCATE



"Publishing your Software Project with the Journal of Open Source Software"



**What are your
fellowship
plans??**

I'D LIKE TO...

- Attend RSE conference and CarpentryConnect (poster/talk)
- Software Carpentry on the Orkney Islands?!





I have an idea!

THE CHALLENGE

- researchers can be reluctant to share their code
- undocumented, untested --> "single-use software"



THE SOLUTION?

Get your code publication ready

✿ Prerequisites

Understand basic Python programming

Understand basic shell scripting

Familiarity with the version control system git

A piece of code (or perhaps an idea for a piece of code) they think may (one day) be submitted to an open source journal

Context

A growing number of researchers use and write code for their research. This code should be published to allow for reproducibility of results; however, despite a growing number of journals requiring that the code needed to reproduce results is made available, this is not currently widespread practice. There are different ways code can be made available - eg: a code snippet on a blog, emailed on request, an interactive notebook available as supplementary information. For more substantial pieces of code there is also a [growing number of journals](#) which are focused on the review and publishing of scientific software. [The Journal of Open Source Software \(JOSS\)](#) is one such journal, and requires that the code is tested, documented and undergoes peer review - as such, they promote best practice in development of scientific software.

↗ The Journal of Open Source Software

The lesson is structured around the submission criteria for [The Journal of Open Source Software](#), however this aligns well with the submission criteria for other journals such as [The Journal of Open Research Software (<https://openresearchsoftware.metajnl.com/>)]

Course Objective

To enable researchers in the materials science community (short term) and beyond (longer term) to publish their code with an open source software journal.

↗ Where these lessons are from

Lesson material inspired by the work of [Code Refinery](#)

Note that the testing chapter was adapted from the workshop [Python Testing and Continuous Integration](#) which was adapted from the Testing chapter in [Effective Computation In Physics](#) by Anthony Scopatz and Kathryn Huff.

Schedule

	Setup	Download files required for the lesson
00:00	1. Introduction	Why should I publish my code? What are the requirements for submission to JOSS?
00:00	2. Documentation	Why should I document my code?
02:03	3. Testing	Why should I test my code?

WHO WILL I WORK WITH?

- Audience: Materials Science initially, if successful --> other domains
- Collaborators: [The Code Refinery](#), Jeremy Cohen (RSE Fellow 2018 / RSLondon), Adam Jackson (SSI Fellow 2018), Anna Krystalli (ROpenSci) + other SSI Fellows?

THANK-YOU!

Presentation slides + more details:
lucydot.github.io/slides