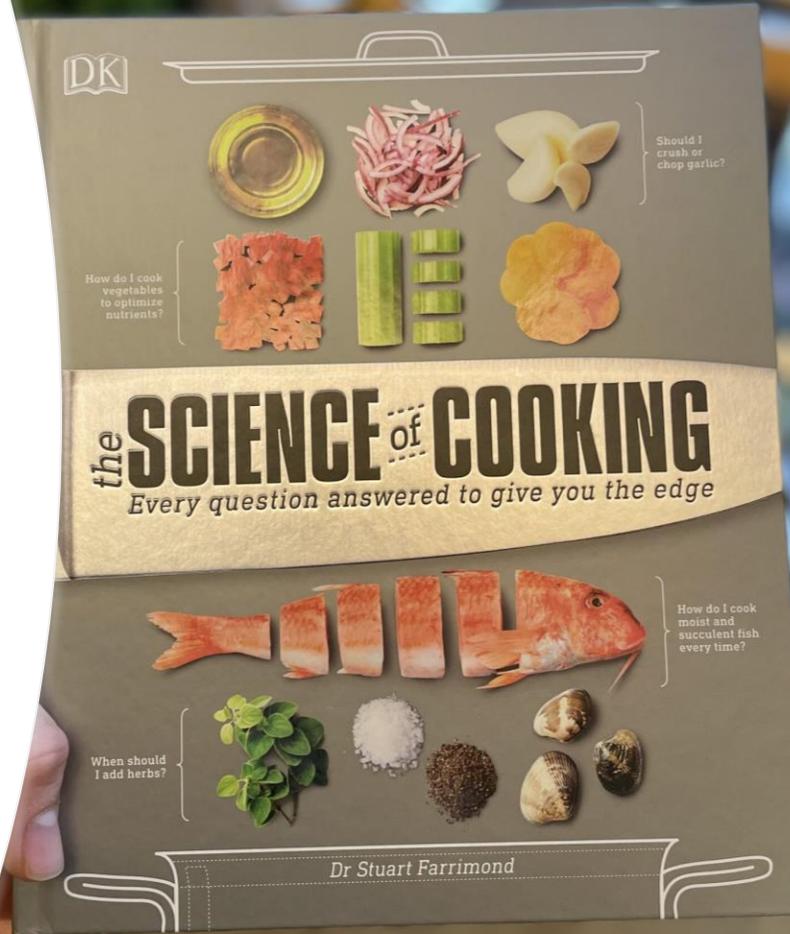# How to write a README file

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Geo Data Team (GDT)

Faculty of GeoScience

Introduction

- **Show others how to cook the food**

- **Keep the quality of the results high**

- **Produce consistent results**

- **Help you and others to not forget**

- **...**

Cream Puffs Recipe

Ingredients:

1 cup All Purpose Flour	100 grams Butter
1 cup Water	1/2 tablespoon Sugar
4 eggs	1/4 tablespoon Salt

Procedure:

1. Combine water, butter, salt & sugar in a pan & cook over medium heat. Bring to a boil then quickly add flour, stir until a film forms on the bottom of the pan.
2. Transfer to a bowl & let it cool down a bit.
3. Add 1 egg at a time until it is fully incorporated before adding the next egg. Stir until soft peaks form.
4. Lay wax paper on some baking pans & pipe 1 1/2 inch circles.
5. Soften pointed peaks with moistened finger.
6. Brush with egg wash to get glossy appearance.
7. Bake in a preheated oven for 30-40 minutes @ 200 degrees Celsius. Bake until the cream puffs rise & are golden brown.
8. Let the cream puffs cool.
9. Slice cream puffs & pipe pastry cream
10. Enjoy!

W5 README?!

What: A text file contains information that is required to understand what the data/code is about

Why: Help you to keep track of and others to understand and reuse the data/code or collaborate with you

Who: The main person(s) who collect and analyze data

When: Better as the project is going on, should be ready before sharing or publishing data/code

Where: In the main folder of the data/code & in each subfolders where details need to be provided
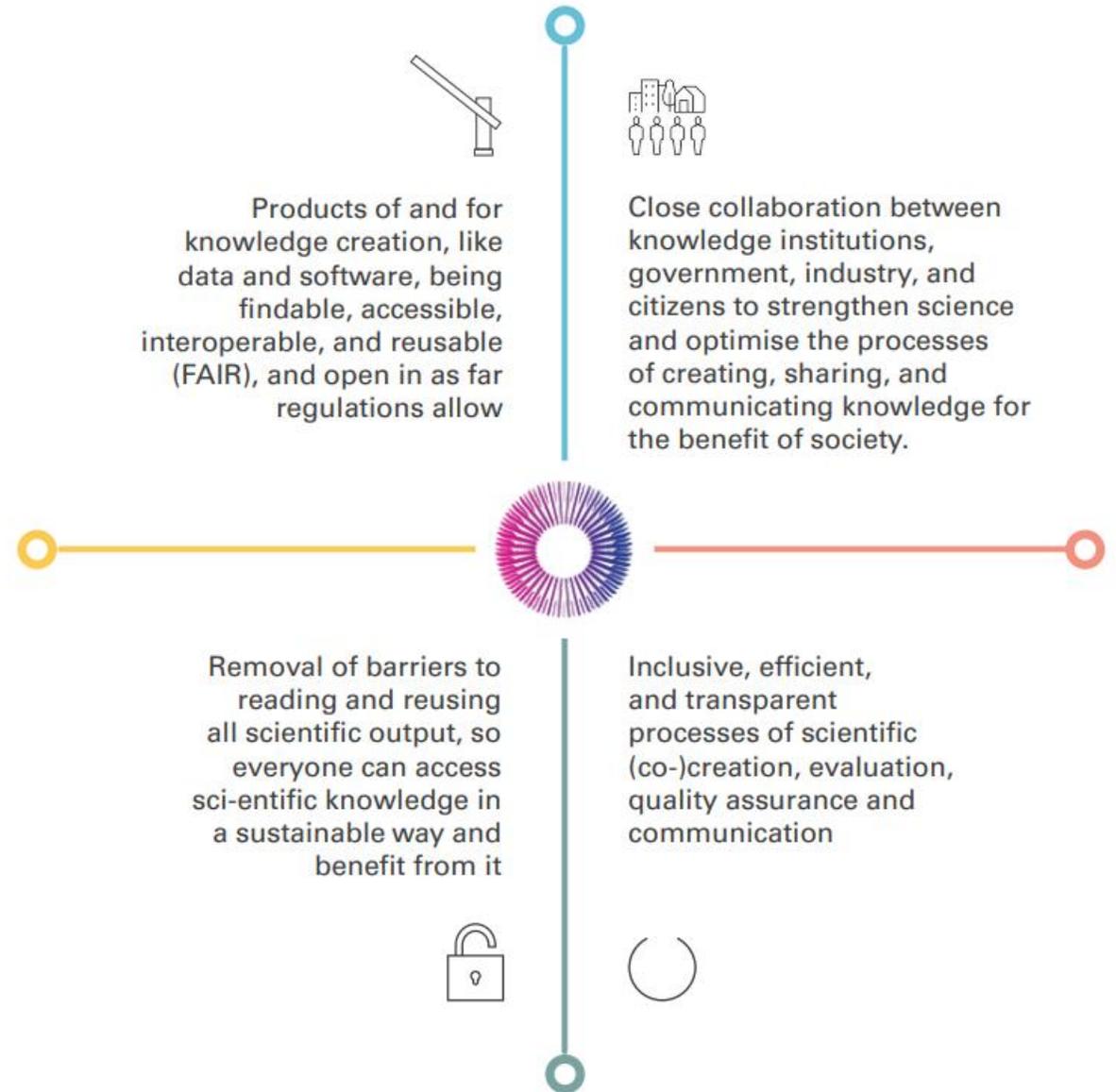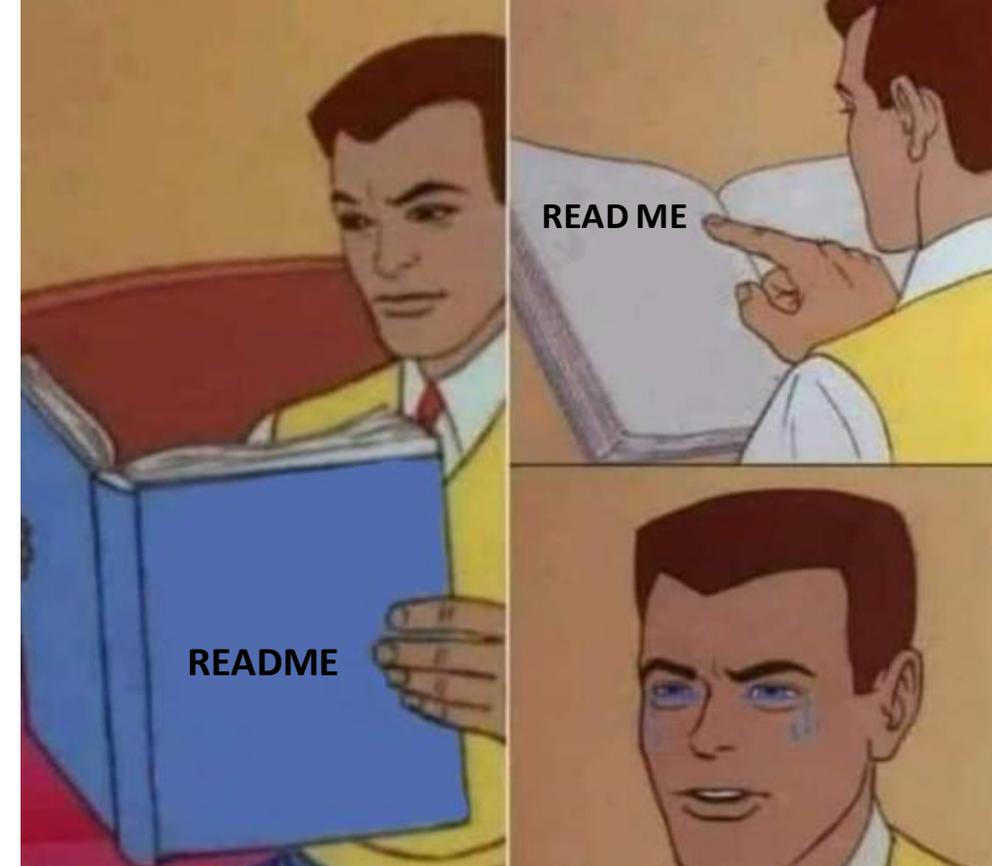
FAIR data

Findable
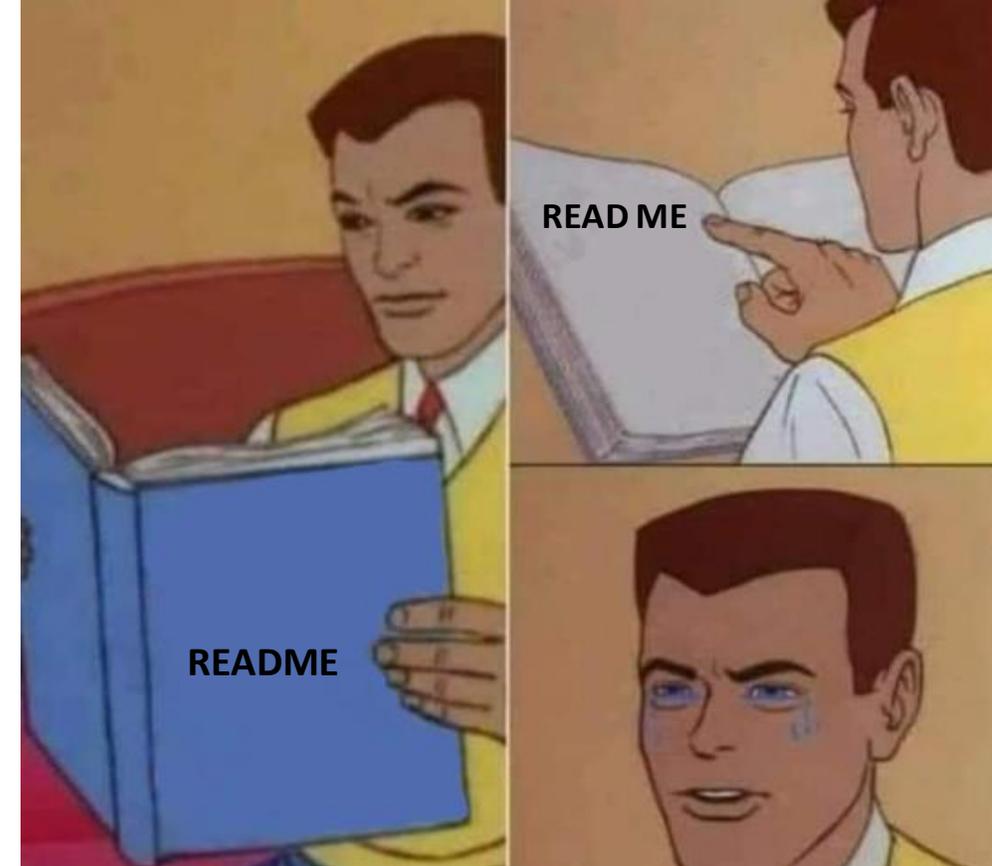
Accessible

Interoperable

Reusable

Products of and for knowledge creation, like data and software, being findable, accessible, interoperable, and reusable (FAIR), and open in as far regulations allow

Close collaboration between knowledge institutions, government, industry, and citizens to strengthen science and optimise the processes of creating, sharing, and communicating knowledge for the benefit of society.

Removal of barriers to reading and reusing all scientific output, so everyone can access sci-entific knowledge in a sustainable way and benefit from it

Inclusive, efficient, and transparent processes of scientific (co-)creation, evaluation, quality assurance and communication

A good README!

A good README!

- **Up-To-Date**
- **Brief & Clear**
- **Detailed**
- **Self Explanatory**
- **Written in an open text file format**

A good README!

🗄	**Project/dataset/code title**
📄	**A short description**
✏️	**Corresponding name(s)**
📞	**Contact info of the corresponding persons**
🪪	**License**
📅	**Date of data collection**
📁	**The folder structure of the dataset**
➕	**etc...**
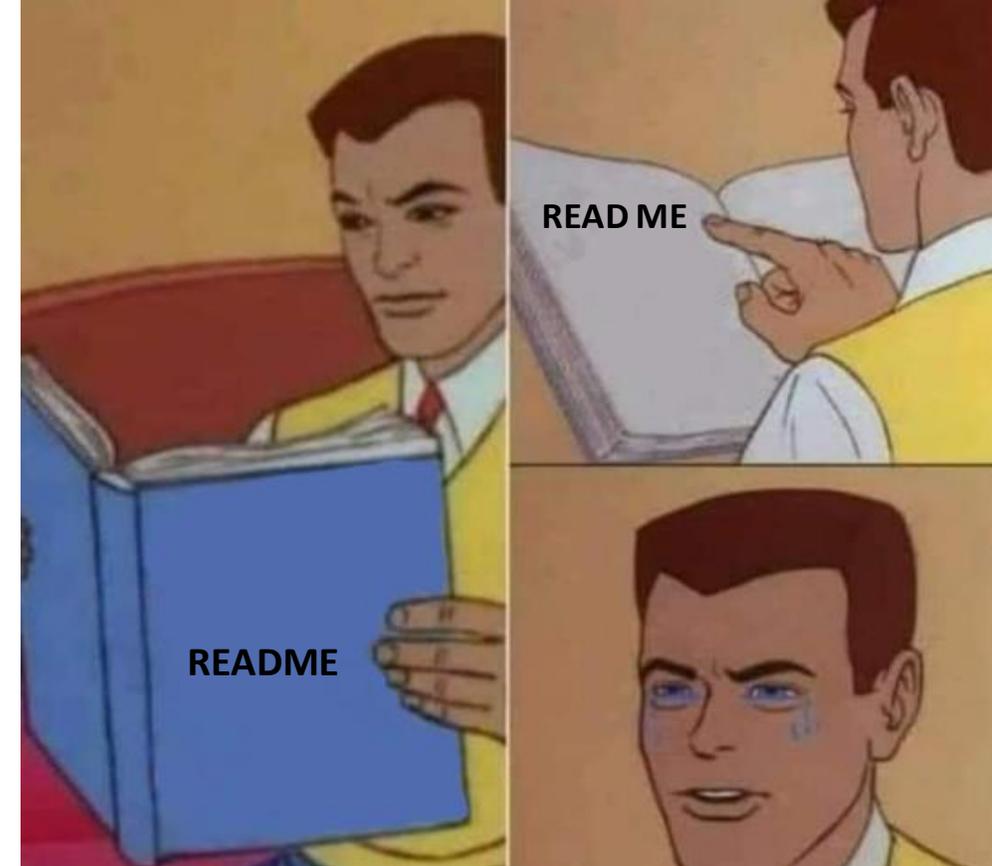
- **Up-To-Date**

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A good README!

- **General information**

- **Data and file overview**

- **Sharing and accessing information**

- **Methodological information**

- **Data-specific information**

A good README!

General Information:

- **Provide a title for the dataset**
- **Name/institution/address/email information for**
  - Principal investigator (or person responsible for collecting the data)
  - Associate or co-investigators
  - Contact persons for questions
- **Date of data collection (can be a single date or a range)**
- **Information about the geographic location of data collection**
- Keywords used to describe the data topic
- Information about funding sources that supported the collection of the data

A good README!

Data and file overview:

- **For each filename, a short description of what data it contains**
- Format of the file if not obvious from the file name
- If the data set includes multiple files that relate to one another, the relationship between the files or a description of the file structure that holds them (possible terminology might include "dataset" or "study" or "data package")
- **Date that the file was created**
- Date(s) that the file(s) was updated (versioned) and the nature of the update(s), if applicable
- Information about related data collected but that is not in the described dataset

A good README!

Sharing and accessing information:

- **Licenses or restrictions placed on the data**
- Links to publications that cite or use the data
- Links to other publicly accessible locations of the data
- Recommended citation for the data

A good README!

Methodological information:

- **Description of methods for data collection or generation (include links or references to publications or other documentation containing experimental design or protocols used)**

- **Description of methods used for data processing (describe how the data were generated from the raw or collected data)**

- Any software or instrument-specific information needed to understand or interpret the data, including software and hardware version numbers

- Standards and calibration information, if appropriate

- Describe any quality-assurance procedures performed on the data

- Definitions of codes or symbols used to note or characterize low quality/questionable/outliers that people should be aware

- People involved with sample collection, processing, analysis and/or submission

A good README!

Data-specific information:
Repeat this section as needed for each dataset (or file, as appropriate)

- Count of number of variables, and number of cases or rows
- **Variable list, including full names and definitions (spell out abbreviated words) of column headings for tabular data**
- Units of measurement
- **Definitions for codes or symbols used to record missing data**
- Specialized formats or other abbreviations used

README file format!

- **Text format (.txt)**

- Windows users:
  - Notepad
  - Notepad++

- Linux users:
  - gedit
  - Emacs

- Mac users:
  - TextEdit

README file format!

- **Text format (.txt)**

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- Linux users:
  - gedit
  - Emacs

- Mac users:
  - TextEdit

Markdown format (.md)

Windows users:
  - Install another text editor e.g., Nextpad

Linux users:
  - gedit
  - Emacs

Mac users:
  - Install another text editor e.g., Markdown Editor

Or

Online Markdown editors

Let's do some practice

Our README templates

https://github.com/UtrechtUniversity/README-Templates.git

Q&A

Contact us via:

datateam.geo@uu.nl