



# SODA: Easily Prepare and Share FAIR ANS-Related Datasets

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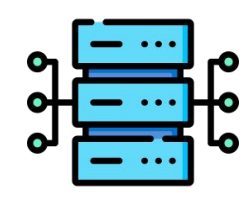
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## Background: FAIR Data

The FAIR (Findable, Accessible, Interoperable, Reusable) Principles are a set of instructions for **making data optimally reusable**. This is critical to:



Enable reproducible, transparent research



Enhance potential for new discoveries (many small reusable data = big data)

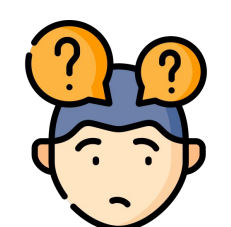


Prevent duplicate studies

Making autonomic nervous system (ANS)-related data FAIR is now possible by formatting the data according to the **SPARC Data Structure (SDS)** and then publishing the resulting dataset on the **SPARC Data Portal** (sparc.science).

## Challenges

Complying with the SDS requires to structure data according to a standard folder structure, follow file and folder naming conventions, include specific metadata files, etc. Moreover, the resulting dataset needs to be uploaded on the SPARC Data Portal.



This process can be **difficult** to understand for data-generating researchers



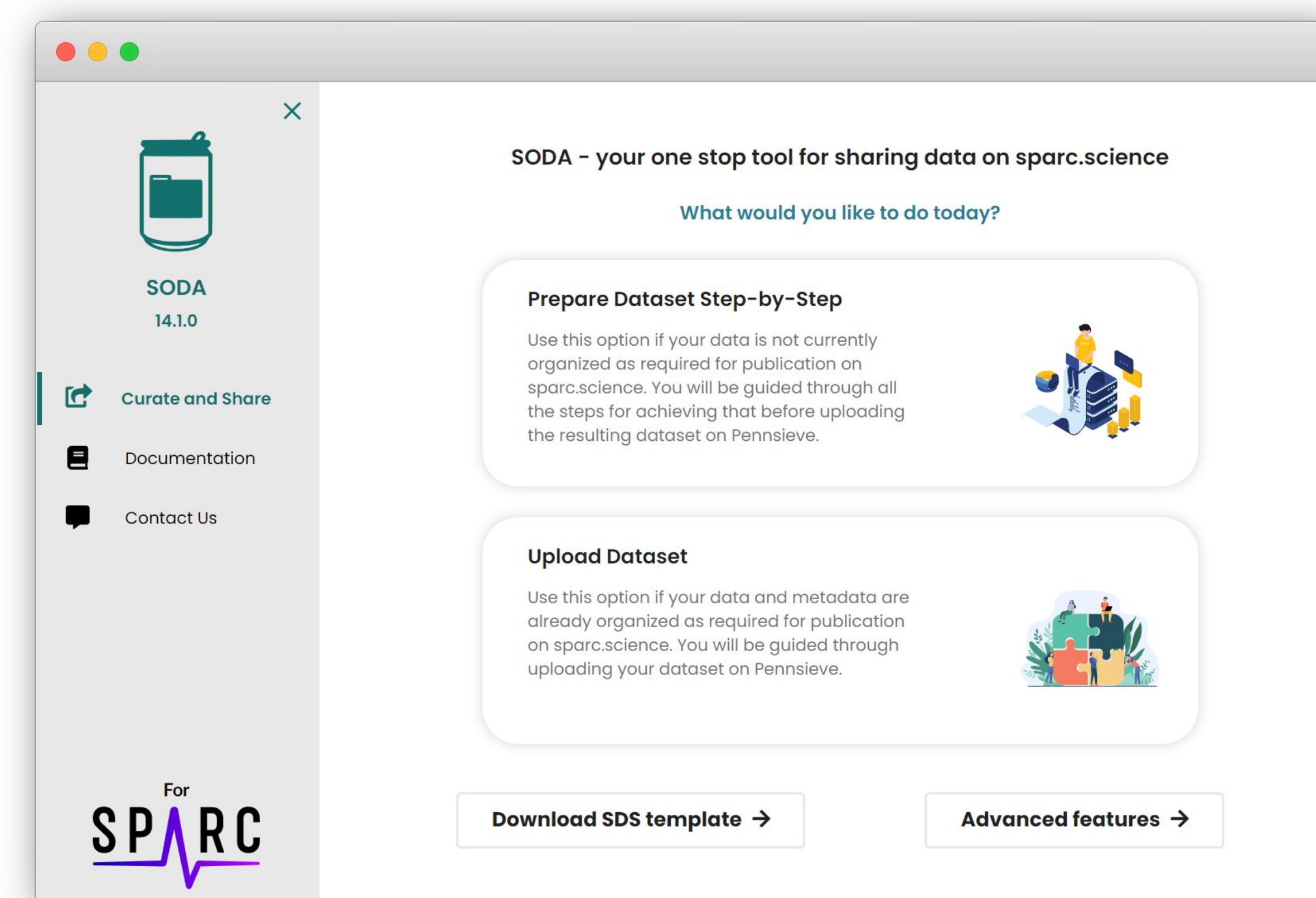
This process can also be **time-consuming** to implement

## Solution: SODA

We developed SODA (Software to Organize Data Automatically), a **free and open-source** desktop software that simplifies publication of FAIR ANS-related datasets as per the SPARC guidelines.

SODA is **available for Windows, macOS, and Linux** computers. It guides users step-by-step into formatting their data according to the SDS and uploading the resulting dataset for publication on the SPARC Data Portal.

SODA streamlines the process by combining **intuitive user interfaces with automations** so users can make their data FAIR without breaking a sweat!



**Like a tax filing software but for “filing” FAIR ANS datasets**

## Impact of SODA



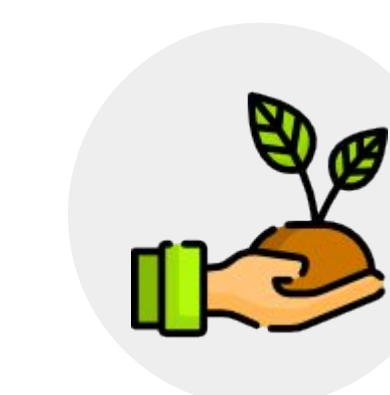
Testing has shown that SODA reduces time, effort, and user-error in making data FAIR

**64%**

of the dataset published on the SPARC Data Portal since January 2022 have used SODA (minimum estimate)

**19 TB**

of data has been processed by SODA since January 2022



Tools inspired by SODA are helping researchers make other data types FAIR, e.g. in the NIH Brain Initiative and the NIH Bridge2AI Program

## Future Work

We are continuing to improve SODA to make it even more intuitive and easy to use.

A major upcoming milestone of SODA is to integrate with MicroFile+ so users can easily convert their microscopy image files to the format required by the SDS.

Ready to make your data FAIR? Download SODA at [docs.sodaforsparc.io](https://docs.sodaforsparc.io) and get started!

