Dat in the Lab

California Digital Library UC3
Code for Science & Society
The Dat Project

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Our common goals:

Support researchers

Improve research data management
Facilitate reproducible research
Streamline data publishing
Develop free, open solutions

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Research today:

Volume and complexity of data are ever increasing[1]

Funders, publishers, institutions moving towards open data policies (NSF, Gates, NIH, PLOS)

(Too) many repositories to choose from[2]

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Research today:

Data publishing and archiving via repositories as “data silos”

Inconsistent adoption of metadata standards

Research data management practices vary between groups and people

Research today:

Spotty metadata

Dead links[3]

Content drift[4]

… is the data backed up?

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Genesis of project:

How can decentralization help researchers to manage
share
publish
archive
find
data?

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Genesis of project:

What should we build that would make using Dat easier?

What would we learn through close collaboration with research groups?

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What's Dat?

Peer-to-peer file sharing protocol for sharing, syncing, versioning

Like git, but built for data

Whitepaper

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Why Dat?

Secure data sharing within a group

Fast sync/download of data from multiple sources (equipment, people)

Automatic dataset versioning

Platform agnostic

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Try Dat!

For this workshop you will need:

a laptop
wifi
no special skills

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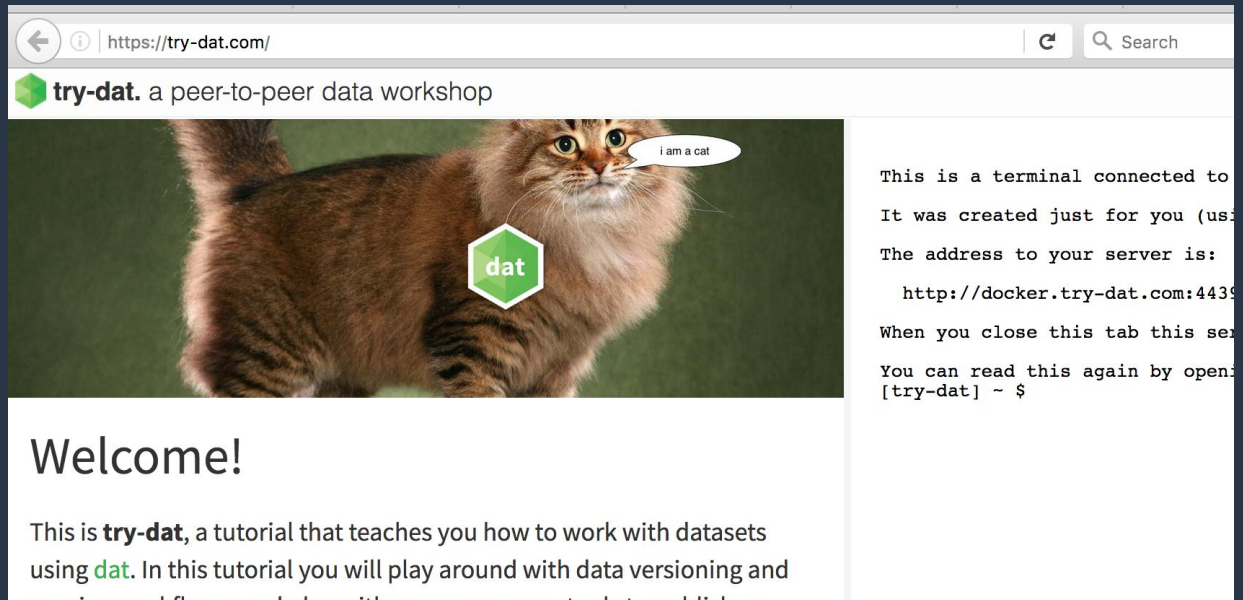
Try Dat!

try-dat.com



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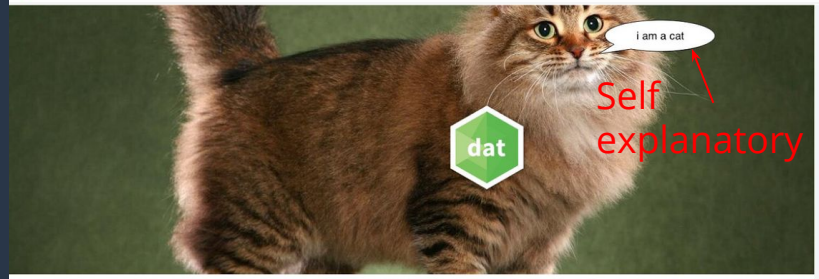
try-dat. a peer-to-peer data workshop



Welcome!

This is **try-dat**, a tutorial that teaches you how to work with datasets using dat. In this tutorial you will play around with data versioning and syncing workflows, and play with some awesome tools to publish or share data over the peer-to-peer web.

Table of Contents

- 01-install
- 02-link
- 03-modify
- 04-live
- 05-website
- 100-beaker

If you look to your right, you'll see there is a terminal that is connected to a **docker container** -- that is a remote Linux computer, in the cloud but accessible right here in your browser!

```
This is a terminal connected to a virtual Ubuntu Linux server.

It was created just for you (using Docker) when you loaded the page.

The address to your server is:

  http://docker.try-dat.com:44391

When you close this tab this server will shut down.

You can read this again by opening `welcome.txt` at any time.
[try-dat] ~ $
```

Virtual terminal, you can type in here!

- .bashrc
- .npm
- .profile
- cat.png
- welcome.txt

Files on the virtual server

```
1
2  This is a terminal connected to a virtual Ubuntu Linux server.
3
4  It was created just for you (using Docker) when you loaded the page.
5
6  The address to your server is:
7
8    http://docker.try-dat.com:44391
9
10 When you close this tab this server will shut down.
11
12 You can read this again by opening `welcome.txt` at any time.
13
```

Contents of `welcome.txt`

Thank you!

Hands-on portion of the workshop starts now

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Chat with us - chat.datproject.org

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Citations & links

1. Dinov ID (2016). Volume and Value of Big Healthcare Data. *Journal of Medical Statistics and Informatics* 4:3. doi:10.7243/2053-7662-4-3.
2. PLOS ONE recommended data repositories list
3. Klein M, Van de Sompel H, Sanderson R, Shankar H, Balakireva L, et al. (2014). Scholarly Context Not Found: One in Five Articles Suffers from Reference Rot. *PLOS ONE* 9(12): e115253. https://doi.org/10.1371/journal.pone.0115253
4. Jones SM, Van de Sompel H, Shankar H, Klein M, Tobin R, et al. (2016). Scholarly Context Adrift: Three out of Four URI References Lead to Changed Content. *PLOS ONE* 11(12): e0167475. https://doi.org/10.1371/journal.pone.0167475

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