

Open Project Management

from an “open” perspective

Instructor: Dr. Bradly Alicea

<http://bradly-alicea.weebly.com>



Lecture 5

All content



Open Project Management



Welcome Back!

Datasets will often contain components that should be open and accessible, and components that require discretion (protections beyond the scope of your open license).


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“rights of the data subject, duties of data controllers or processors, transfers of personal data to third countries, supervisory authorities, cooperation among member states, remedies, liability or penalties for breach of rights, and miscellaneous final provisions..... processing of personal data should be designed to serve mankind”

https://en.wikipedia.org/wiki/General_Data_Protection_Regulation

My first exposure to open data (Fall 2000).....

 **National Center for Biotechnology Information**
National Library of Medicine National Institutes of Health

PubMed Entrez BLAST OMIM Taxonomy Structure

Search for


SITE MAP

- About NCBI**
general and contact information
- GenBank**
sequence submission support and software
- Molecular databases**
sequences, structures and taxonomy
- Literature databases**
PubMed and OMIM
- Genomic biology**
whole genomes and related resources
- Tools**
for data mining
- Research at NCBI**
people, projects and seminars
- Education**
teaching resources and on-line tutorials
- FTP site**
download data and software

What does NCBI do?

Established in 1988 as a national resource for molecular biology information, NCBI creates public databases, conducts research in computational biology, develops software tools for analyzing genome data, and disseminates biomedical information - all for the better understanding of molecular processes affecting human health and disease.

Protein Reviews on the Web

 Protein Reviews on the Web (PROW) is adding about 60 new guides on human proteins in an expanded format, in collaboration with the Leukocyte Differentiation Antigen Workshop. PROW Guides are authoritative, short, structured reviews on proteins and protein families.

NCBI in the News

The Gene Expression Omnibus (GEO) microarray database was recently featured in Science Magazine's NetWatch (August 4th). GEO is now available for the deposition of datasets by scientists.


[Disclaimer](#) [Privacy statement](#)

Revised September 13, 2000

Hot Spots

- ▶ Cancer genome anatomy project
- ▶ Clusters of orthologous groups
- ▶ Coffee Break
- ▶ Electronic PCR
- ▶ Gene expression omnibus
- ▶ Genes and disease
- ▶ Human genome resources
- ▶ Human/mouse homology maps
- ▶ LocusLink
- ▶ Malaria genetics & genomics
- ▶ ORF finder
- ▶ Reference sequence project
- ▶ Retrovirus resources
- ▶ Serial analysis of gene expression
- ▶ UniGene
- ▶ VecScreen

NCBI today!

**National Library of Medicine**
National Center for Biotechnology Information

- NCBI Home**
- Resource List (A-Z)
- All Resources
- Chemicals & Bioassays
- Data & Software
- DNA & RNA
- Domains & Structures
- Genes & Expression
- Genetics & Medicine
- Genomes & Maps
- Homology
- Literature
- Proteins
- Sequence Analysis
- Taxonomy
- Training & Tutorials
- Variation


Welcome to NCBI

The National Center for Biotechnology Information advances science and health by providing access to biomedical and genomic information.

[About the NCBI](#) | [Mission](#) | [Organization](#) | [NCBI News & Blog](#)


Submit

Deposit data or manuscripts into NCBI databases




Download

Transfer NCBI data to your computer




Learn

Find help documents, attend a class or watch a tutorial




Develop

Use NCBI APIs and code libraries to build applications




Analyze

Identify an NCBI tool for your data analysis task



Research

Explore NCBI research and collaborative projects



(Shared) Data Vocabulary



Version 4 Protocol:

<http://docs.oasis-open.org/odata/odata/v4.0/errata02/os/complete/part1-protocol/odata-v4.0-errata02-os-part1-protocol-complete.html>

The screenshot shows the GitHub repository page for `OData/vocabularies`. At the top, there are navigation links for Code, Issues (10), Pull requests (2), Actions, Projects, Wiki, Security, and Insights. Below this, there are buttons for "Go to file", "Add file", and "Code". The main content area displays a commit history table with columns for commit message, date, and number of commits. The commit messages include "Fixup markdown to display properly", "Move old vocabularies to odata-v3 folder", "Change to Formatted Value", "Move XML declaration in display vocabulary", "Fixup markdown to display properly", "Rename OData.Community.AlternateKeys.V1.xml to OData.Community.K...", "Adds the Core and Capabilities vocabulary xml", "Adds the Core and Capabilities vocabulary xml", "Adds contributing.md", "Adds license.md and readme.md", "Adds license.md and readme.md", and "Fix mime type for CSDL files". Below the commit history, there is a section for the `readme.md` file, which contains the following text:

Shared vocabularies provide a powerful extensibility point for OData, from [the OData spec](#).

Shared vocabularies

One of the many extensibility points in the OData protocol is the concept of vocabularies. A vocabulary is a collection of terms. Annotations are used to apply terms to OData elements.

Using the same vocabulary for a multitude of different services allows common interpretation of the content regardless of the specific structure and property names used. In concept this is quite similar to [schema.org](#).

Central storage

This repository is a central clearinghouse for the OData community to work on vocabularies that are intended to be shared widely. The vocabularies are [licensed under MIT](#), however, we encourage the community to make every effort to iterate on the shared vocabularies rather than forking them (as this defeats the purpose of a shared vocabulary).

On the right side of the repository page, there is an "About" section with the following information:

- OData vocabulary definitions and usage
- Readme
- View license
- 11 stars
- 15 watching
- 8 forks

Below the "About" section, there are sections for "Releases" (No releases published), "Packages" (No packages published), and "Contributors" (5 contributors).

Making (csv) Data Accessible in Github

devoworm / DevoWorm Public

forked from balicea/DevoWorm

Pin

Unwatch 3

Fork 7

Star 6

Code Pull requests Actions Projects Wiki Security Insights Settings

master DevoWorm / Differentiation Tree Dataset / developmental-cells-and-position.csv

Go to file

...



devoworm Add files via upload

Latest commit #24afdd on Oct 15, 2018 History

1 contributor

643 lines (643 sloc) | 63.6 KB

Raw

Blame



Search this file...

| | Parent Cell | x | y | z | Daughter Cell A | x | y | z | Daughter Cell B | x | y |
|----|-------------|----------------|----------------|----------------|-----------------|----------------|----------------|----------------|-----------------|----------------|----------------|
| 1 | P0 | 422.07777778 | 248.31666666 | 14.32666666 | P1 | 445.3393565 | 253.8605633875 | 15.23819611625 | AB | 317.785053825 | 251.80042565 |
| 2 | AB | 317.785053825 | 251.80042565 | 14.70036533625 | ABp | 358.98412735 | 267.2765126875 | 14.87758774625 | ABa | 251.1503696625 | 254.4083624875 |
| 3 | P1 | 445.3393565 | 253.8605633875 | 15.23819611625 | EMS | 380.806094425 | 240.9462640375 | 15.0949706325 | P2 | 489.6439353875 | 252.4161763 |
| 4 | ABa | 251.1503696625 | 254.4083624875 | 15.06383718375 | ABar | 285.0467059375 | 268.8158069875 | 15.18162948625 | ABal | 223.0276970375 | 245.9936990875 |
| 5 | ABp | 358.98412735 | 267.2765126875 | 14.87758774625 | ABpr | 410.7116492875 | 264.9469936375 | 14.93181156375 | ABpl | 351.0989584875 | 254.3836405125 |
| 6 | P2 | 489.6439353875 | 252.4161763 | 15.4385942575 | P3 | 501.819885075 | 247.4435226625 | 15.54214668875 | C | 454.07863055 | 262.890848875 |
| 7 | EMS | 380.806094425 | 240.9462640375 | 15.0949706325 | MS | 346.9338562875 | 243.0266701375 | 14.66644114375 | E | 432.6886088875 | 249.09343005 |
| 8 | ABal | 223.0276970375 | 245.9936990875 | 15.47635926375 | ABalp | 242.464728125 | 237.7061582625 | 15.527250415 | ABala | 213.12140965 | 257.4950707875 |
| 9 | ABar | 285.0467059375 | 268.8158069875 | 15.18162948625 | ABarp | 329.2359091 | 277.3430934375 | 15.3806736825 | ABara | 298.0093306375 | 262.2539351625 |
| 10 | ABpl | 351.0989584875 | 254.3836405125 | 15.31050525 | ABplp | 353.5002455375 | 238.3328286875 | 15.6882521425 | ABpla | 282.4308481625 | 257.285102425 |
| 11 | ABpr | 410.7116492875 | 264.9469936375 | 14.93181156375 | ABprp | 442.3363238875 | 256.029673575 | 14.8141148 | ABpra | 399.7654673 | 272.58985375 |
| 12 | C | 454.07863055 | 262.890848875 | 15.42513003375 | Cp | 467.7115583 | 263.5736586375 | 15.45729870625 | Ca | 398.6028986 | 259.4625688 |
| 13 | P3 | 501.819885075 | 247.4435226625 | 15.54214668875 | P4 | 458.5687175625 | 237.6282943 | 15.21732716625 | D | 502.8339735625 | 248.3478592875 |
| 14 | E | 432.6886088875 | 249.09343005 | 15.53709975125 | Ep | 445.7888371875 | 247.3436190125 | 15.22587999875 | Ea | 403.6561410875 | 249.6521681125 |
| 15 | MS | 346.9338562875 | 243.0266701375 | 14.66644114375 | MSp | 363.428951275 | 246.21360585 | 14.60027755125 | MSa | 301.2879952375 | 237.4424445375 |

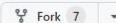
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forked from balicea/DevoWorm



Unwatch 3



Star 6

Code Pull requests Actions Projects Wiki Security Insights Settings

DevoWorm / Differentiation Tree Dataset / developmental-cells-and- in master

Cancel changes

Edit file Preview changes

Spaces 2 No wrap

```
1 Parent Cell1,x,y,z,Daughter CellA,x,y,z,Daughter CellB,x,y,z
2 P0,422.07777778,248.31666666,14.32666666,P1,445.3393565,253.8605633875,15.23819611625,AB,317.785053825,251.80042565,14.70036533625
3 AB,317.785053825,251.80042565,14.70036533625,ABpr,358.98412735,267.2765126875,14.87758774625,ABa,251.1503696625,254.4083624875,15.06383718375
4 P1,445.3393565,253.8605633875,15.23819611625,EHS,380.806094425,248.9462640375,15.0949706325,P2,489.6439353875,252.4161763,15.4385942575
5 ABa,251.1503696625,254.4083624875,15.06383718375,ABar,285.0467059375,268.8158069875,15.18162948625,ABa1,223.0276970375,245.9936990875,15.47635926375
6 ABp,358.98412735,267.2765126875,14.87758774625,ABpr,410.7116492875,264.9469936375,14.93181156375,ABp1,351.0898584875,254.3836405125,15.31050525
7 P2,489.6439353875,252.4161763,15.4385942575,P3,501.819885075,247.4435226625,15.54214668875,C,454.07863055,262.890848875,15.42513003375
8 EHS,380.806094425,248.9462640375,15.0949706325,MS,346.9338562875,243.0266701375,14.66644114375,E,432.6886088875,249.09343005,15.53709975125
9 ABa1,223.0276970375,245.9936990875,15.47635926375,ABa1p,242.464728125,237.7061582625,15.527250415,ABa1a,213.12140965,257.4950707875,15.303375395
10 ABar,285.0467059375,268.8158069875,15.18162948625,ABarp,329.2359091,277.3430934375,15.3806736825,ABara,298.0093306375,262.2539351625,14.688905605
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13 C,454.07863055,262.890848875,15.42513003375,Cp,467.7115583,263.5736586375,15.45729870625,Ca,398.6028986,259.4625688,15.24209138375
14 P3,501.819885075,247.4435226625,15.54214668875,P4,458.5687175625,237.6282943,15.21732716625,D,502.8339735625,248.3478592875,15.54572799125
15 E,432.6886088875,249.09343005,15.53709975125,Ep,445.7888371875,247.3436190125,15.22587999875,Ea,403.6561410875,249.6521681125,15.27480772125
16 MS,346.9338562875,243.0266701375,14.66644114375,MSp,363.428951275,246.21360585,14.6002755125,MSa,301.2879952375,237.4424445375,14.99291964375
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24 ABprp,442.3363238875,256.029673575,14.8141148,ABprpp,482.9915543625,260.7433145875,15.08752792375,ABprpra,423.971967,261.430650075,14.80598721875
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27 D,502.8339735625,248.3478592875,15.54572799125,Op,482.323181025,243.179955275,14.8597933,Da,463.00259315,236.2067770375,15.5706295225
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29 Ep,445.7888371875,247.3436190125,15.22587999875,Epr,448.9758524625,256.869949475,14.81277038,Ep1,416.992742075,245.7332712625,15.04448888875
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31 MSp,363.428951275,246.21360585,14.60027755125,MSpp,390.809417,248.49255985,14.62691858,MSpa,324.281298975,244.4855799,14.650432595
32 P4,458.5687175625,237.6282943,15.21732716625,,,,,,,,,
33 ABa1aa,204.5349467875,255.8945048375,15.08994478375,ABa1aap,227.3749115,248.2103345125,14.902155465,ABa1aaa,197.0315137,257.065360475,14.9963821375
34 ABa1ap,229.9191832625,266.7367609,15.54799668875,ABa1app,257.6543689375,257.991198125,15.124922645,ABa1apa,218.013403975,265.9387344375,15.456148715
35
```

Electric Tables V0.1

Experimenting with personal databases and the web as a texture

I spend all day long slinging URLs around. Mostly, when I copy and paste a URL it's treated as a string of characters. But you and I know that a URL is **heavy**. A URL is a representation of a blog post, or a product I want to buy, or a hike I want to go on, or an Airbnb I'm going to book.

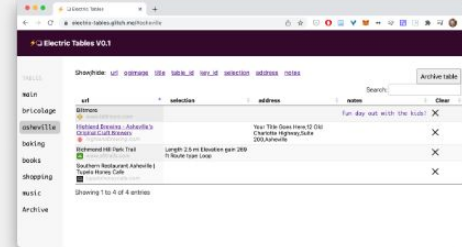
URLs are also **useful**. Opening tabs and browsing the web is essential to task completion. Tab sprawl is a symptom of a basic task: web foraging¹.

In short, I spend a lot of both professional and personal time on the web - grabbing, saving, sending and bookmarking URLs.

What if we could work with URLs in a way that embraced their weight. That was designed for web foraging?

Say hello to **Electric Tables**. It's a little research project and prototype to explore the idea of structured data, personal databases and web as texture.

It's pretty simple. It looks something like this:



Electric Tables works by taking a URL, extracting some key data and adding it to a table.

Experimental Formats

Electric Tables: create common representations of data and make them sharable and public.

- idea of web formats and documents as an organizing principle for organizational efforts.

¹I first learned of the term "web foraging" in [this great paper](#) where they asked programmers to build a PHP chat room and they spent 19% of their time on the web vs writing code! And that was in 2009!



DRYAD



Open Data Stack

Technology: (Jupyter, OpenStack)

Standards: (json for storage, retrieval, metadata; FAIR for making public).

Cloud Security and Access: AWS for controlled access.

Archival: DataDryad (versioning, permanent doi).

Markdown Tutorial

Using Github-flavored Markdown

```
### Markdown is great!  
[Hello World](http://hello-world.github.io)  
<p align="center">  
    
</p>  
Markdown for Github!
```

Markdown is great!

[Hello World](#)



Markdown for Github!

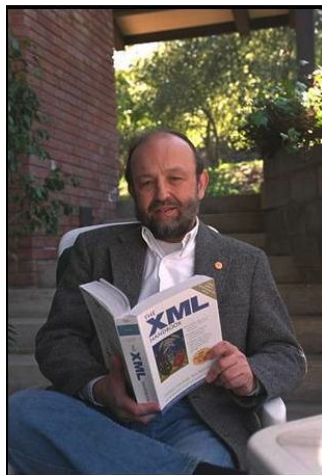
Markup Language History

Markup: a text-encoding system that coordinates formatting instructions (tags) with plain text.

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GenCode (Generic Coding): 1967, sent control notations to a typesetting device.



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SGML: 1986, precursor of HTML and XML.

Learn more:

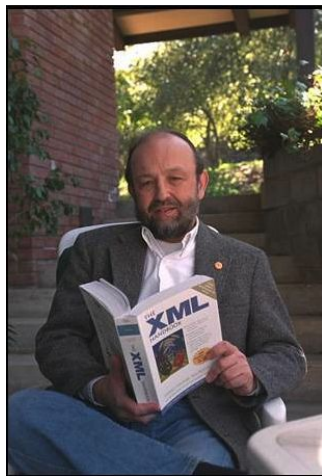
<https://www.historyofinformation.com/detail.php?id=1665>

XML: used for encoding metadata, specialized SGML for docs on the internet.

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XML: used for encoding metadata, specialized SGML for docs on the internet.

TeX, LaTeX: 1970s, Donald Knuth. Descriptive markup system for scientific documents (Mathematics typesetting).



Standards:

Describe tags and their permitted uses, allow for different standards to be interchangeable (used in the same document).

| | |
|---|--|
| “Fury said to a mouse, That he met in the house, , ‘Let us both go to law: <i>I</i> will prosecute <i>you.</i> — Come, I’ll take no denial; We must have a trial: For really this morning | <pre><lg> <l rend="font-size(110%) indent(-60)">"Fury said to</l> <l rend="font-size(100%) indent(-40px)">a mouse, That</l> <l rend="font-size(100%) indent(0px)">he met</l> <l rend="font-size(100%) indent(10px)">in the</l> <l rend="font-size(100%) indent(20px)">house,</l> <l rend="font-size(100%) indent(17px)">'Let us</l> <l rend="font-size(100%) indent(5px)">both go</l> <l rend="font-size(100%) indent(-7px)">to law:</l> <l rend="font-size(100%) indent(-23px)"><hi rend="italic">I</hi> will</l> <l rend="font-size(100%) indent(-26px)">prosecute</l> <l rend="font-size(90%) indent(-40px)"><hi rend="italic">you.</hi> —</l> <l rend="font-size(90%) indent(-30px)">Come, I'll</l> <l rend="font-size(90%) indent(-20px)">take no</l> <l rend="font-size(90%) indent(-7px)">denial;</l> ... </lg></pre> |
|---|--|

General review of text encoding:

<https://www.kdnuggets.com/2019/11/text-encoding-review.html>

Why Markdown?

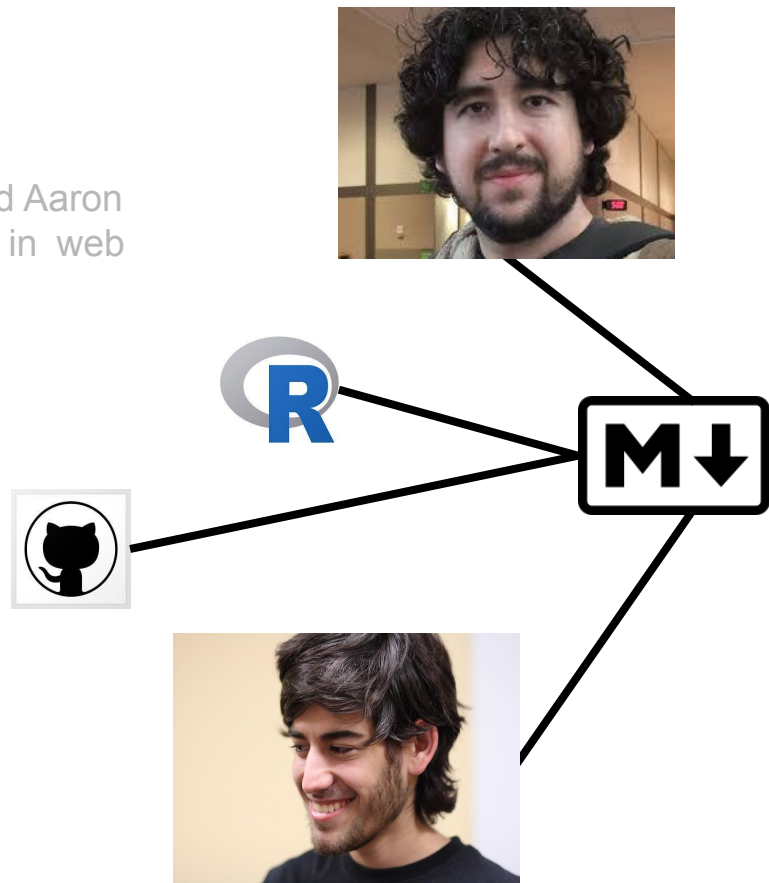
Markdown was developed in 2004 by John Gruber and Aaron Swartz for easily-formatted, easy-to-read (rendered in web browser or digital notebook).



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Comes in different flavors: examples include **Github-flavored** (version-control) and **R-flavored**.



Why Markdown?



Comes in different flavors: examples include Github-flavored (version-control) and R-flavored.

Github-flavored Markdown can be combined with **HTML tags**, **LaTeX equations**, and other elements to create attractive technical documents.

OpenWorm/DevoWorm Education

devoworm / OW-DW-Education Public

<> Code Issues 17 Pull requests Actions Projects 1 Security Insights

master 1 branch 0 tags Go to file Add file - Code -

| | | |
|-----------------------------------|-----------------------------------|--------------|
| devoworm Update README.md | d96f091 on Apr 13, 2022 | 203 commits |
| Data Repo | Create alladulccellsinembryo.csv | 3 years ago |
| Developmental Data Science | Update About.md | 2 years ago |
| Dynamical Systems and Development | Update About.md | 2 years ago |
| General-Ed-Resources | Update README.md | 3 years ago |
| Models and Representations | Update About.md | 2 years ago |
| Pattern Formation | Update About.md | 2 years ago |
| Web Notes | Create README.md | 3 years ago |
| CC-BY-SA-4.0 License.md | Create CC-BY-SA-4.0 License.md | 4 years ago |
| Code of Conduct.md | Update Code of Conduct.md | 2 years ago |
| README.md | Update README.md | 9 months ago |
| contribution-guidelines.md | Update contribution-guidelines.md | 3 years ago |
| roadmap.md | Updated roadmap.md | 3 years ago |

README.md

Welcome to the [OpenWorm/DevoWorm Education](#) initiative! We're a part of [Mozilla Open Leaders 7!](#) We were also be an active participant in Mozilla's "[Sprint for Internet Health](#)" 2019. Read [this blogpost](#) for more information!

Check out our [DevoWormML repository](#) for course materials that combine Developmental Biology and Machine Learning. Learn about our approach through the prism of computational techniques applied to our problem domain.

Feel free to submit contributions! Get up to speed on our [contribution guidelines](#) and check out this [digital badge](#), which teaches you how to [submit a pull request](#). [Watch this repo](#) for new content!

About

No description, website, or topics provided.

Readme

4 stars

4 watching

5 forks

Releases

No releases published

Packages

No packages published

Contributors 5

Languages

- Jupyter Notebook 100.0%

[Interview on Mozilla Open Leaders Medium](#)

Description of Turing Model

The Turing reaction-diffusion model [1], sometimes called *chemical morphogenesis*, is a mean field description in the form of balance equations. On the left hand side of the equation, we have to find the partial derivative of macrostates over time. The first part of the right-hand side of the equation shows the effect of a chemical reaction. The second part shows transport variables such as heat diffusivity (D) and macroscopic variables (x_1, x_2, \dots, x_i) as they operate along a gradient (∇).

$$\frac{\partial x_i}{\partial t} = V_i(x_j, \lambda) + D_i \nabla^2 x_i \quad (1)$$

Educational Application:

Wiki-style layout, can build and collaborate using minimal syntax.

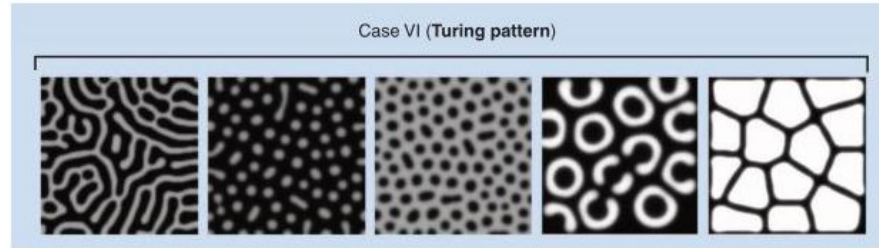


Figure 1. Example of patterns that result from Equation 1. Taken from [2].

The coupled feedback system described in equations 2 and 3 are a restatement of the dynamics described in equation 1. Equation 2 characterizes the changes in I per unit time (see Figure 1). $G(A, I)$ represents the reaction component, while D_I represents the diffusion component.

$$\frac{\partial I}{\partial t} = G(A, I) + D_I \frac{\partial^2 I}{\partial x^2} \quad (2)$$

Equation 3 characterizes the changes in A per unit time (see Figure 1). $F(A, I)$ represents the reaction component, while D_A represents the diffusion component.

$$\frac{\partial A}{\partial t} = F(A, I) + D_A \frac{\partial^2 A}{\partial x^2} \quad (3)$$

Source:

OW-DW Education, <https://github.com/devoworm/OW-DW-Education/blob/master/Pattern%20Formation/Reaction-Diffusion.md>

Markdown vs. HTML

Header 1

Header 1

Header 3

Header 3

| Markdown | HTML | Command |
|----------------------|----------------------|---------|
| <i>italics</i> | <i>italics</i> | Italics |
| bold | bold | Bold |
| link | link | Link |

Which ones are written in Markdown, and which ones are built in HTML?

Markdown vs. HTML

Header 1

Header 1

Header 3

Header 3

| Markdown | HTML | Command |
|----------------------|----------------------|---------|
| <i>italics</i> | <i>italics</i> | Italics |
| bold | bold | Bold |
| link | link | Link |



Is this written in Markdown or HTML?

Markdown vs. HTML

Header 1

Header 1

Header 3

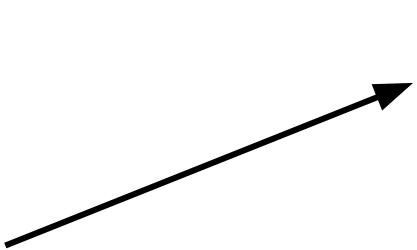
Header 3

| Markdown | HTML | Command |
|----------------------|----------------------|---------|
| <i>italics</i> | <i>italics</i> | Italics |
| bold | bold | Bold |
| link | link | Link |

```
1 # Header 1
2 <H1> Header 1 </H1>
3
4 ### Header 3
5 <H3> Header 3 </H3>
6
7
8
9
10 Markdown | HTML | Command |
11 -----|-----|-----|
12 italics | <i>italics</i> | Italics |
13 bold | <b>bold</b> | Bold |
14 [link](http://link.com) | <A HREF="http://link.com">link</A> | Link
15
16
```


Markdown vs. HTML

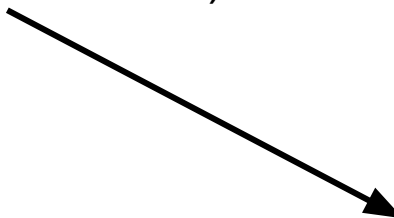
Line breaks: characters (headers) and spacing (two spaces at end of line).



```
1 # Header 1
2 <H1> Header 1 </H1>
3
4 ### Header 3
5 <H3> Header 3 </H3>
6
7
8
9
10 Markdown | HTML | Command |
11 -----|-----|-----|
12 italics | <i>italics</i> | Italics |
13 bold | <b>bold</b> | Bold |
14 [link](http://link.com) | <A HREF="http://link.com">link</A> | Link
15
16
```

Markdown vs. HTML

While difficult to master,
table formatting is flexible
and intuitive (vs. HTML)



```
1 # Header 1
2 <H1> Header 1 </H1>
3
4 ### Header 3
5 <H3> Header 3 </H3>
6
7
8
9
10 Markdown | HTML | Command |
11 -----|-----|-----|
12 _italics_ | <i>italics</i> | Italics |
13 **bold** | <b>bold</b> | Bold |
14 [link](http://link.com) | <A HREF="http://link.com">link</A> | Link
15
16
```

Markdown vs. HTML

Bulleted list

- eggs
- milk
- cheese

Bulleted list:

- apples
- oranges
- pears

Numbered list:

1. lather
2. rinse
3. repeat

Numbered list

1. eggs
2. milk
3. cheese

Let's compare how
bulleted and numbered
lists are built

Two of these are written in
Markdown, the other two in
HTML

Markdown vs. HTML

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- eggs
- milk
- cheese

Bulleted list:

- apples
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- pears

Numbered list:

1. lather
2. rinse
3. repeat

Numbered list

1. eggs
2. milk
3. cheese

```
<> Edit file Preview changes Spaces 2 Soft wrap
17
18 Bulleted list
19
20 * eggs
21 * milk
22 * cheese
23
24 <p>Bulleted list:</p>
25
26 <ul>
27 <li>apples</li>
28 <li>oranges</li>
29 <li>pears</li>
30 </ul>
31
32 <p>Numbered list:</p>
33
34 <ol>
35 <li>lather</li>
36 <li>rinse</li>
37 <li>repeat</li>
38 </ol>
39
40 Numbered list
41
42 1. eggs
43 2. milk
44 3. cheese
```

Two of these are written in
Markdown, the other two in
HTML

Markdown vs. HTML

Bulleted list

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32 <p>Numbered list:</p>
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34 <ol>
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36 <li>rinse</li>
37 <li>repeat</li>
38 </ol>
39
40 Numbered list
41
42 1. eggs
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44 3. cheese
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For more formal lessons:

Markdown Tutorial:

<https://www.markdowntutorial.com/>

Mastering Markdown:

<https://guides.github.com/features/mastering-markdown/>

Adding HTML and LaTeX elements

HTML element example

Image example



This text is the image legend *with HTML specification*

HTML element will center the image. LaTeX will automatically center the image.

$$F(t) = \Delta T_n$$

(1)

Adding HTML and LaTeX elements

↩ Edit file

🕒 Preview changes

```
1  ## HTML element example
2
3  <p align="center">
4    <b>Image example</b>
5  </p>
6
7  <p align="center">
8    <BR>
9    This text is the image legend <i>with HTML specification</i>
10 </p>
11
12 HTML element will center the image. LaTeX will automatically center the image.
13
14 $$ {F(t)} = \Delta{T}_n
15 \tag{1}
16 $$
17
```

HTML element example

Image example



This text is the image legend with *HTML specification*

HTML element will center the image. LaTeX will automatically center the image.

$$F(t) = \Delta T_n$$

(1)

Creating a book manuscript using {bookdown}

Posted on March 7, 2021 by [dreams](#) in R bloggers | 0 Comments

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How to create a manuscript using bookdown (examples in R-flavored markdown).

- Bookdown is a specialized markup language
- formatting and other document specific features.

Reproducible Pipeline of Documentation

R Markdown

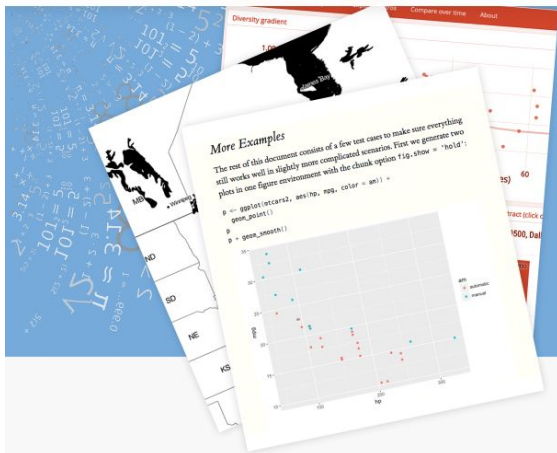
from  Studio

[Get Started](#) [Gallery](#) [Formats](#) [Articles](#) [Book](#) [References](#) 

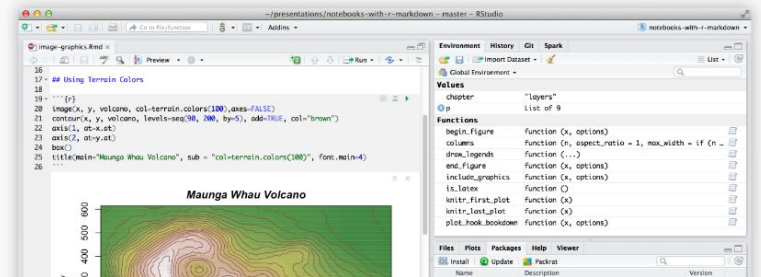
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<https://rmarkdown.rstudio.com/>

Markdown is Versatile and long-lived, but.....

“Lightweight” markup language
(layout and style)

Not standardized, many
flavors not cross-compatible

Markdown is Versatile and long-lived, but.....

“Lightweight” markup language
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Shallow learning curve
compared to HTML, LaTeX

Limited control over semantic
specification of text

Markdown is Versatile and long-lived, but.....

“Lightweight” markup language
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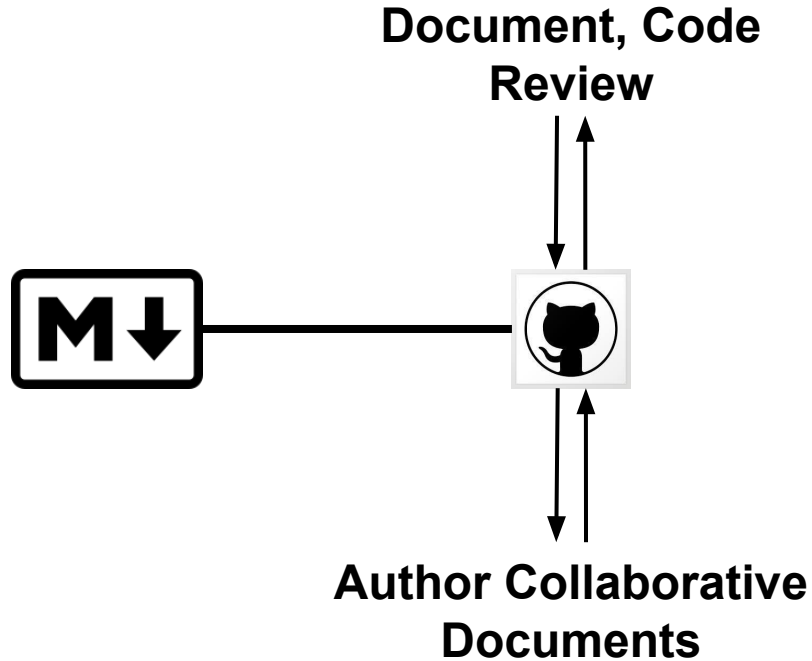
Shallow learning curve
compared to HTML, LaTeX

Limited control over semantic
specification of text

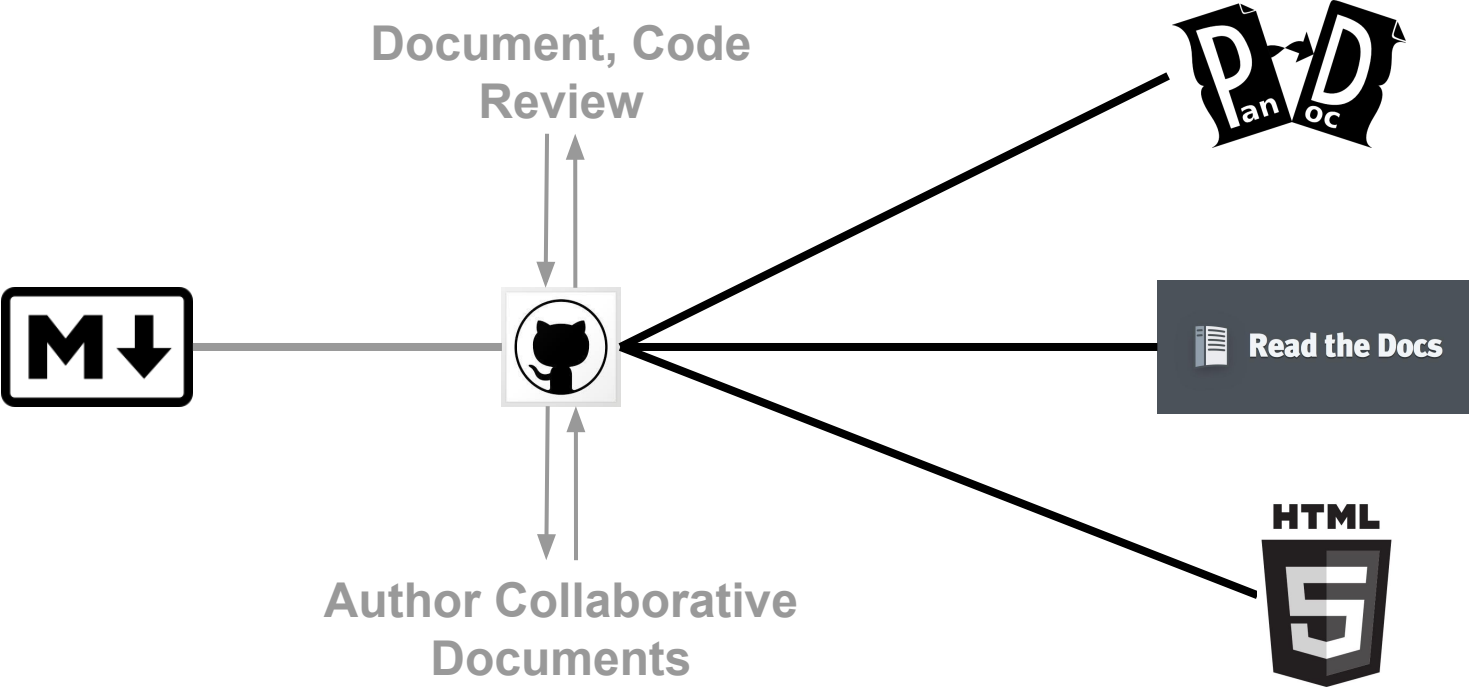
Platform agnostic (basic flavor)

Stylistic limitations (alignment,
specialized fonts)

Using Markdown as Part of a Pipeline



Using Markdown as Part of a Pipeline



Using Markdown as Part of a Pipeline

Kiko Fernandez-Reyes, How to use Pandoc to produce a research paper

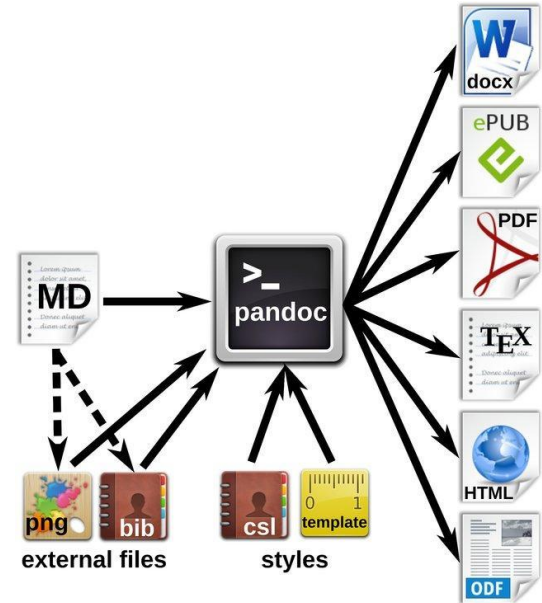
<https://opensource.com/article/18/9/pandoc-research-paper>

Robert Talbert, How I wrote my book using Markdown, Pandoc, and a little help from the internet

<https://medium.com/@roberttalbert/how-i-wrote-my-book-using-markdown-pandoc-and-a-little-help-from-the-internet-4c5ee33a95fb>

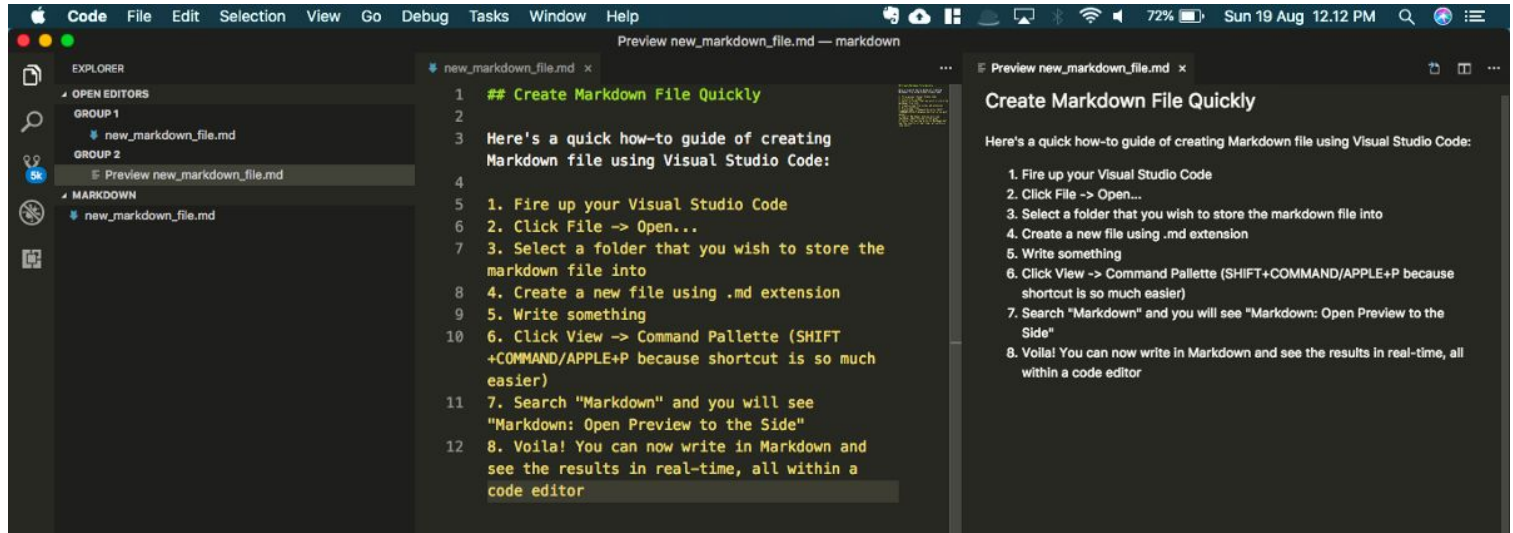
Create beautiful, semantically-rich documents with Pandoc Scholar

<https://github.com/pandoc-scholar/pandoc-scholar>



Krewinkel and Winkler: Figure 3 in "Formatting Open Science", *PeerJ Computer Science*, 3(5), e112 (2017).

Convert docs and integrate with Github repos: Visual Studio Code!



How-To Guide: Markdown in Visual Studio Code

<https://medium.com/@michael.isprihanto/how-to-guide-markdown-in-visual-studio-code-e8a68cc01f64>

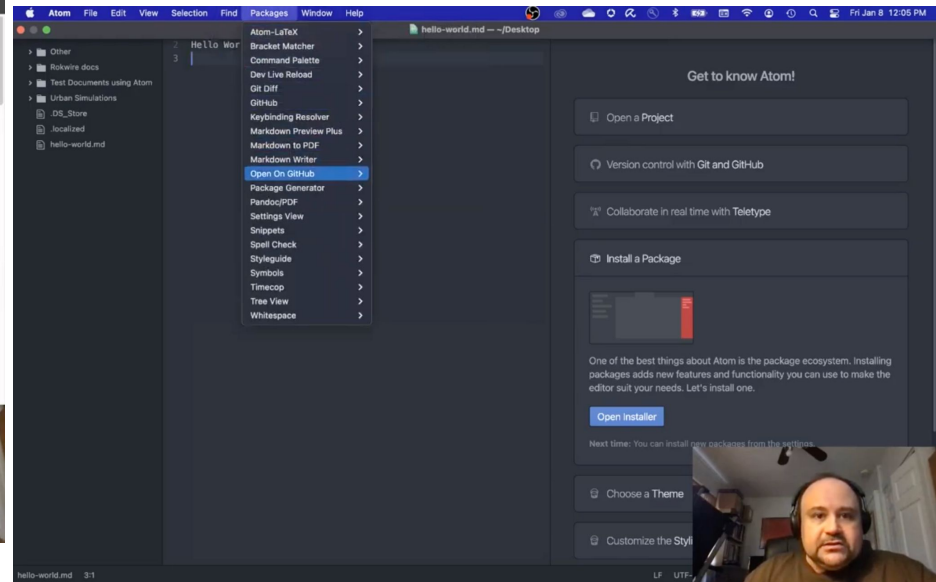
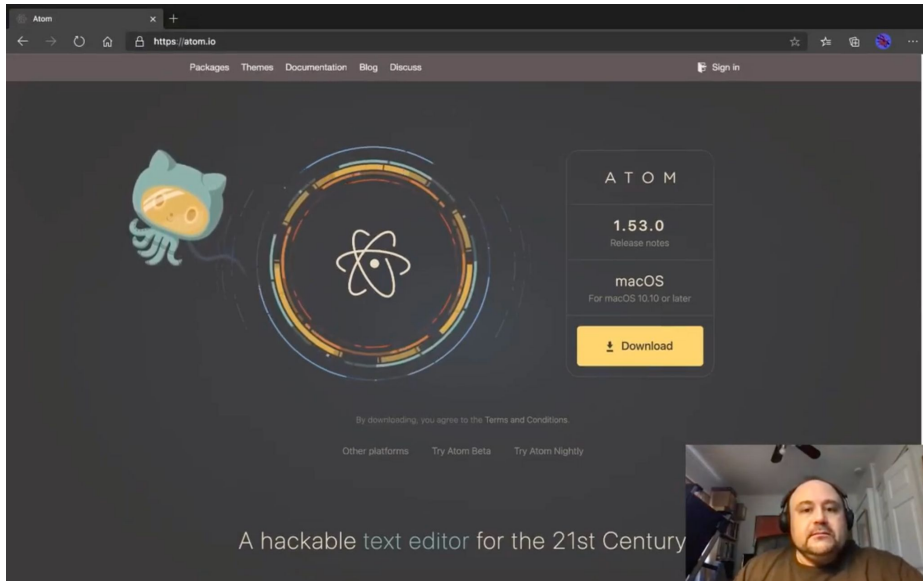
Build an Amazing Markdown Editor Using Visual Studio Code and Pandoc

<https://thisdavej.com/build-an-amazing-markdown-editor-using-visual-studio-code-and-pandoc/>

Atom.io (now archived) Tutorials

Markdown to HTML (1K views)

https://www.youtube.com/watch?v=1lkr_tyTpZc



Open Source Rotation

<http://tiny.cc/OpenSourceRotation>



Installing Packages and Markdown to pdf (588 views)

<https://www.youtube.com/watch?v=hrY3k99WIDI&list=PLfOmoVklxmn3-rxIAWGcdC9V0hni2kNLO>

MyST Markdown

Quickstart Tutorials

- MyST Install
- MyST Websites
- MyST Documents
- MyST Markdown Guide

Authoring

- Typography
- Callouts (admonitions)
- Images and figures
- Math and equations
- Tables
- Code and code-blocks
- Cross-references
- External references
- Citations and bibliography
- Blocks and comments
- Diagrams
- Dropdowns, Tabs & Cards

Executable Content

- Interactive notebooks

Websites

- Table of Contents
- Search Engines and Social
- Accessibility & performance

MYST MARKDOWN



MyST Javascript Tools



`myst.js` is a set of open-source, community-driven tools designed for scientific communication, including a powerful authoring framework that supports blogs, online books, scientific papers, reports and journals articles.

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[Create Scientific Publications](#)

[Project Goals](#)

Extending Markdown (accessible) to a larger publishing strategy (wider set of needs).

How do I learn more?

Catherine Heath, The Ins and Outs of Using Markdown for Technical Writing

<https://document360.io/blog/markdown-for-technical-writing/>

Eric Holscher, Why You Shouldn't Use "Markdown" for Documentation

<https://www.ericholscher.com/blog/2016/mar/15/dont-use-markdown-for-technical-docs/>

Peter Conrad, Why You Should and Should Not Use Markdown

<https://medium.com/@stymied/why-you-should-and-should-not-use-markdown-1b9d70987792>

Adam Hyde, What's Wrong with Markdown?

<https://www.adamhyde.net/whats-wrong-with-markdown/>