FROM LAW TO CODE

My Unexpected Journey into Open Source

geekcamp.sg, 14 October 2023

Source of this presentation

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- No legal advice blah blah blah
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OUTLINE

- Who am I
- Origins of the *redlines* library
- A brief, sparkling moment of virality
- How I "open source"
- Why you should do it too

WHO AM I

CORPORATE COUNSEL BY DAY

- PQE: 10+
- Previous life: all sorts of litigation
- Now: In house counsel

CODER BY NIGHT

- Blog: LoveLawRobots
- Mastodon
- X/Twitter

WHAT ARE LAWYERS LIKE?

Lawyers are **perfectionists**

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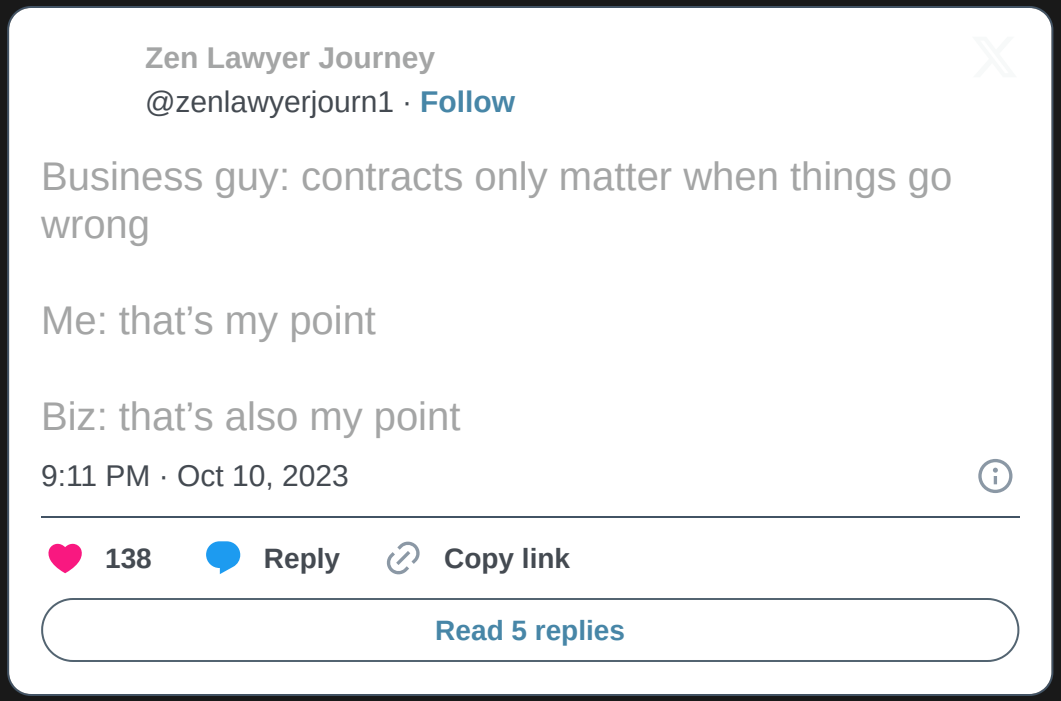
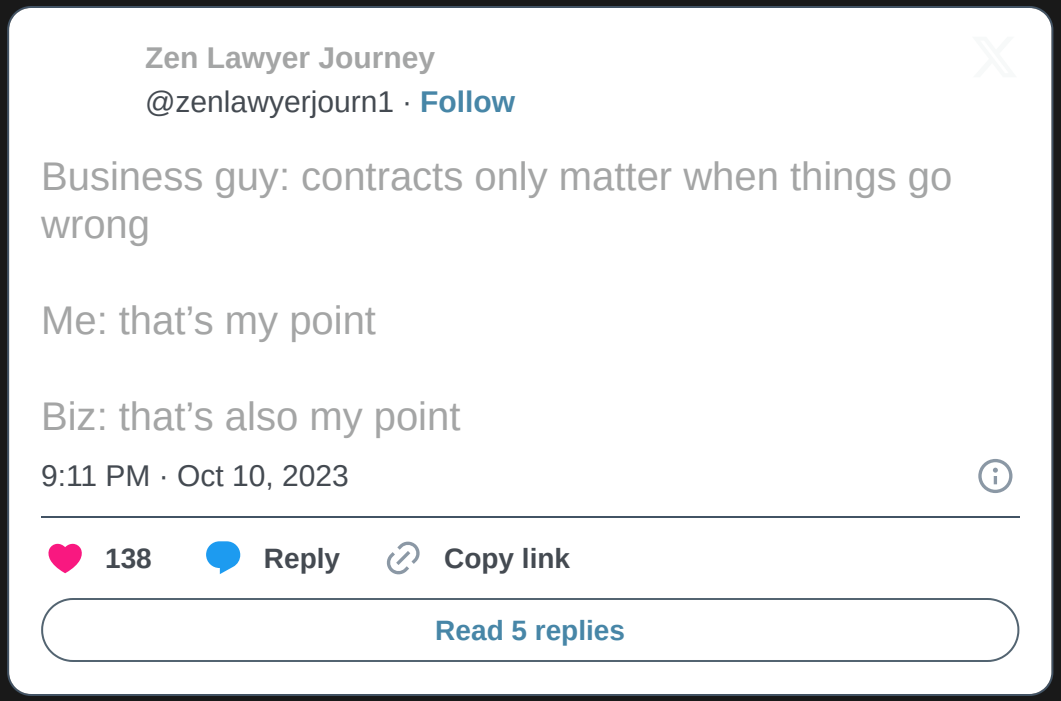
to a fault...

Lawyers are very conscious of **risks**



Lawyers are very conscious of **risks**

Maybe a bit too much...



Lawyers are doing fine

Over 30% spike in number of lawyers who quit in 2021, mostly those with under 5 years' experience: Law Society

BY **NABILAH AWANG**

Published **January 10, 2022**
Updated **January 10, 2022**

Lawyers are doing fine

At least most of us are...

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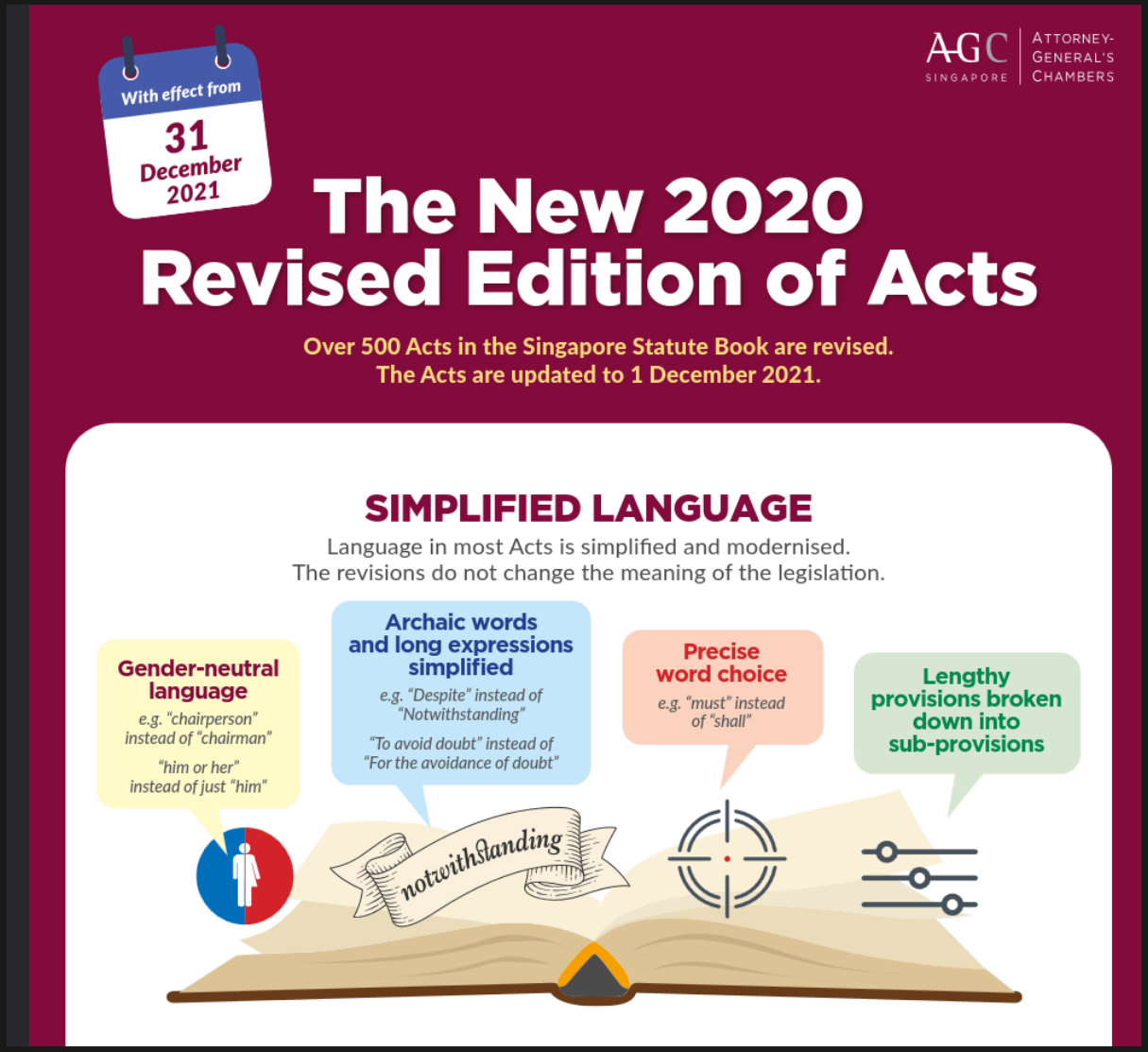
SO… HOW DID *redlines* START?

IT BEGINS WITH A PLAN TO DO "DATA SCIENCE"

Big changes to the laws in Singapore at the end of 2021



SIMPLIFIED LANGUAGE

Language in most Acts is simplified and modernised.

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Language in most Acts is simplified and modernised.

Archaic words and long expressions simplified

e.g. "Despite" instead of "Notwithstanding"

"To avoid doubt" instead of "For the avoidance of doubt"

SIMPLIFIED LANGUAGE

Language in most Acts is simplified and modernised.

Lengthy provisions broken down into sub-provisions

SIMPLIFIED LANGUAGE

Language in most Acts is simplified and modernised.

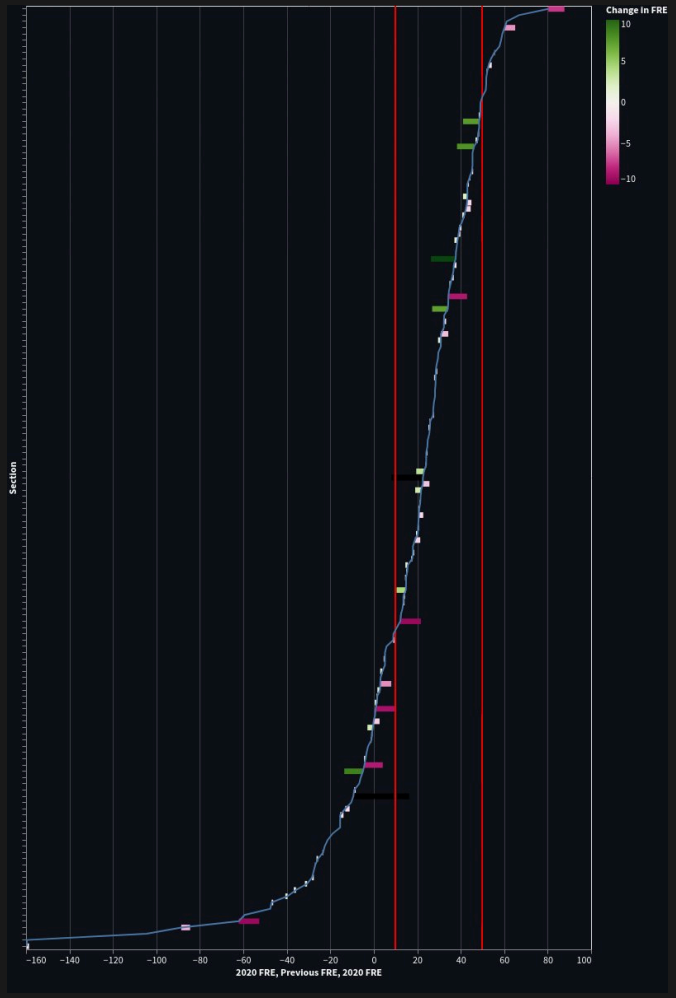
Gender-neutral language

e.g. "chairperson" instead of "chairman"

"him or her" instead of just "him"

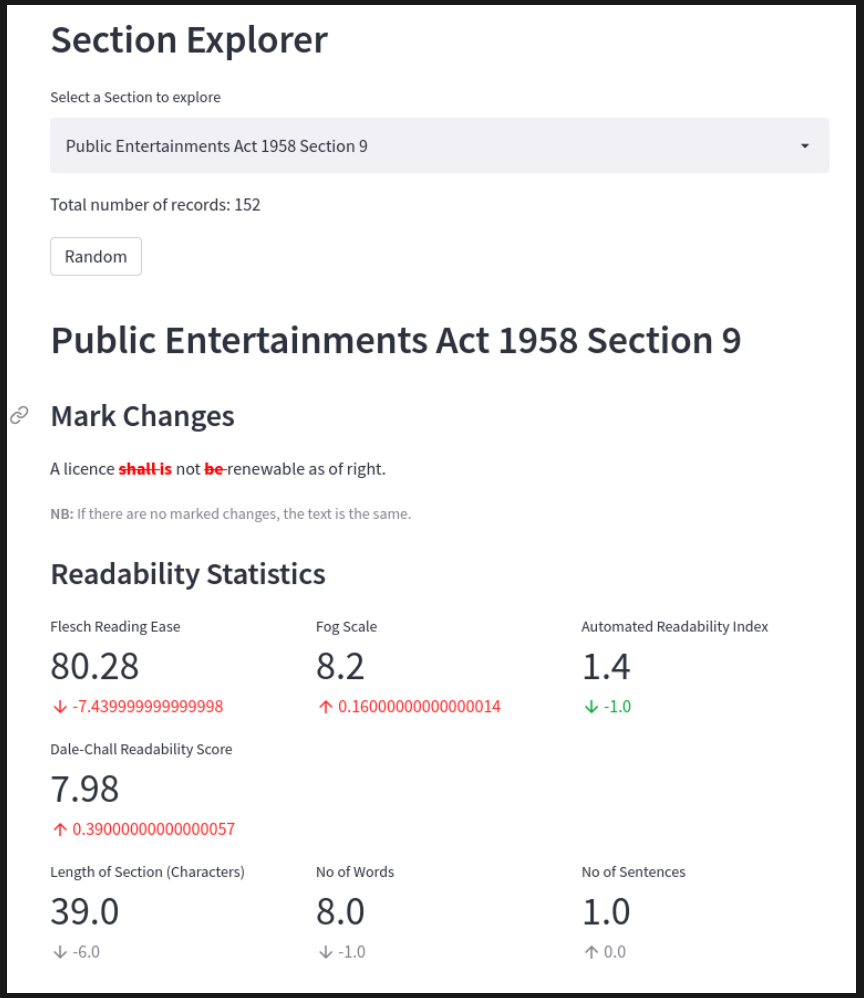
HOW WOULD WE EVALUATE THE READABILITY OF LEGISLATION?

It looks like this...



You can read more about my conclusions in this project on my blog.

I wanted a way to explore changes in detail (by section) too



So I needed a way to visualise changes in text.

Text comparison

Previous Text Link

Capacity to incur liability as a party to a bill is co-extensive with capacity to contract. Nothing in this section shall enable a corporation to make itself liable as drawer, acceptor, or indorser of a bill unless it is competent to it to do so under the law for the time being in force relating to corporations. Where a bill is drawn or indorsed by a person below the age of 18 years or a corporation having no capacity or power to incur liability on a bill, the drawing or indorsement entitles the holder to receive payment of the bill, and to enforce it against any other party thereto.

2020 Rev Edn Text Link

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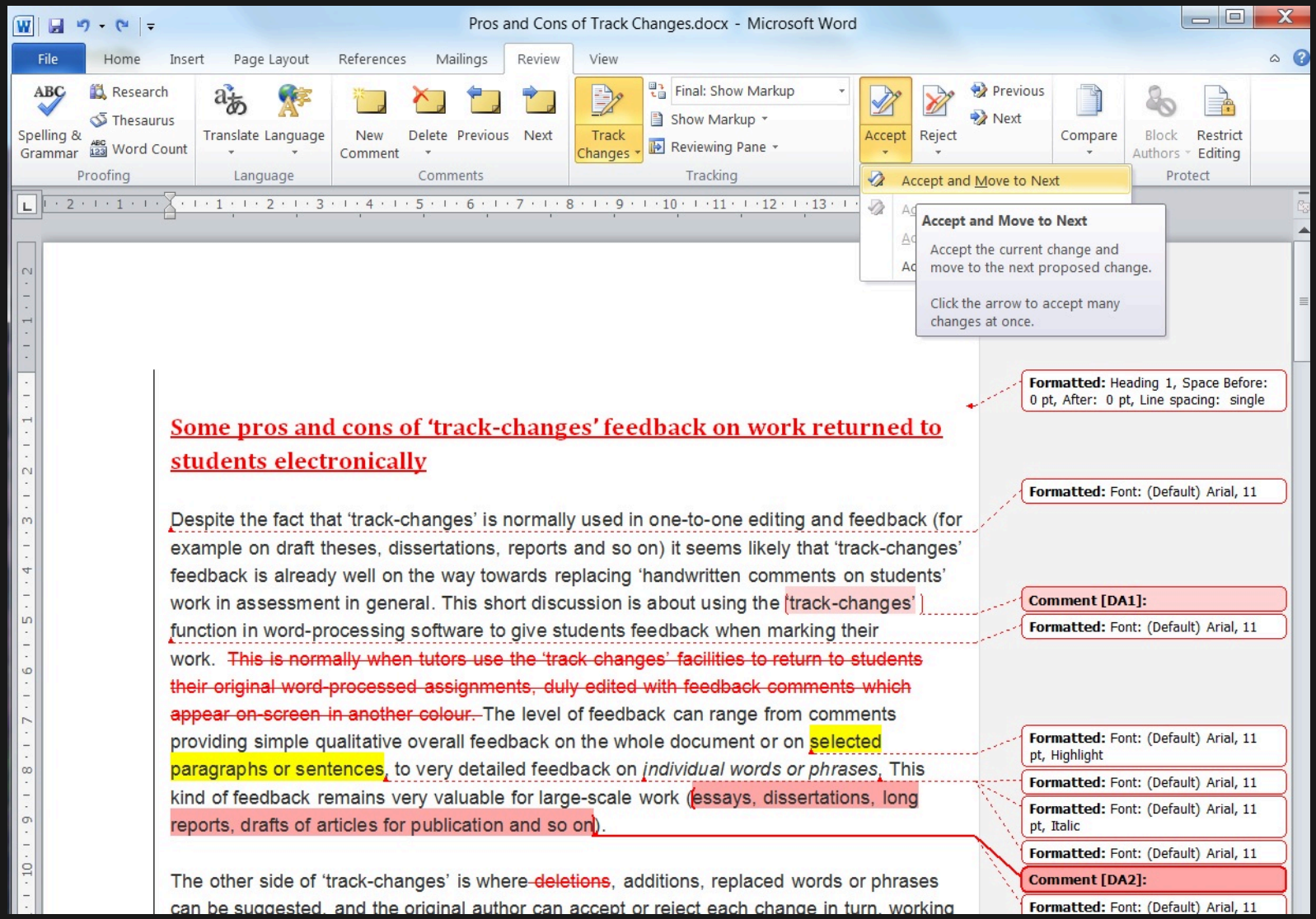
The "python" way was not appealing to me.

```
from pprint import pprint

pprint(result)
['    1. Beautiful is better than ugly.\n',
 '-   2. Explicit is better than implicit.\n',
 '-   3. Simple is better than complex.\n',
 '+   3.   Simple is better than complex.\n',
 '?     ++\n',
 '-   4. Complex is better than complicated.\n',
 '?            ^                     ---- ^\n',
 '+   4. Complicated is better than complex.\n',
 '?          ++++ ^                         ^\n',
 '+   5. Flat is better than nested.\n']
```

I wanted Microsoft Word… in Markdown!



I looked all over the web for something that could do this, but I couldn't find any

I looked all over the web for something that could do this, but I couldn't find any

I had to make my *own*.

HOW DOES *redlines* WORK?

A brief introduction

What's the easiest and fastest way to get my red lines?

What's the easiest and fastest way to get my red lines?

I used the `SequenceMatcher` in the standard python library.

HOW TO GET A *redline*

HOW TO GET A *redline*

The quick brown fox jumps over the lazy dog.

VS

The quick brown fox walks past the lazy dog.

HOW TO GET A *redline*

Step 1: Tokenize text into a list of words

HOW TO GET A *redline*

```
["The" "quick" "brown" "fox" "jumps"
    "over" "the" "lazy" "dog."]
```

VS

```
["The" "quick" "brown" "fox" "walks"
    "past" "the" "lazy" "dog."]
```

HOW TO GET A *redline*

Step 2: Compare the list of words using SequenceMatcher

HOW TO GET A *redline*

```
["The" "quick" "brown" "fox" "jumps"
 "over" "the" "lazy" "dog."]
```

VS

```
["The" "quick" "brown" "fox" "walks"
 "past" "the" "lazy" "dog."]
```

HOW TO GET A *redline*

Step 3: Get the opcodes

- `('equal', 0, 4, 0, 4)`
- `('replace', 4, 6, 4, 6)`
- `('equal', 6, 9, 6, 9)`

You can read more about SequenceMatcher in the official docs: https://docs.python.org/3/library/difflib.html#difflib.SequenceMatcher

HOW TO GET A *redline*

Step 4: Create the redlines from the opcodes

- `('equal', 0, 4, 0, 4)` -> "The quick brown fox"
- `('replace', 4, 6, 4, 6)` -> "~~**jumps over**~~ **walks past** "
- `('equal', 6, 9, 6, 9)` -> "the lazy dog."

HOW TO GET A *redline*

Step 5: Finish by forming the output

"The quick brown fox ~~**jumps over**~~ **walks past** the lazy dog."

IT WORKS FOR MY APP!

```
Processing:  Weights and Measures Act 1975
Previous: Any person who — wilfully obstructs an inspector acting in the execution of this Act or any subsidiary l
egislation made thereunder; wilfully fails to comply with any requirement properly made of him by an inspector und
er section 24 or 25; or without reasonable cause fails to give any inspector acting as aforesaid any other assista
nce or information which the inspector may reasonably require of him for the purposes of the performance by the in
spector of his functions under this Act or any subsidiary legislation made thereunder, shall be guilty of an offen
ce. If any person, in giving to an inspector any such information as is mentioned in subsection (1), gives any inf
ormation which he knows to be false, he shall be guilty of an offence.
 (8.04,29.48,33.2,2,125)
Current: Any person who — wilfully obstructs an inspector acting in the execution of this Act or any subsidiary le
gislation made under this Act; wilfully fails to comply with any requirement properly made of the person by an ins
pector under section 24 or 25; or without reasonable cause fails to give any inspector acting as aforesaid any oth
er assistance or information which the inspector may reasonably require of the person for the purposes of the perf
ormance by the inspector of his or her functions under this Act or any subsidiary legislation made under this Act,
shall be guilty of an offence. If any person, in giving to an inspector any such information as is mentioned in su
bsection (1), gives any information which the person knows to be false, the person shall be guilty of an offence.
 (2.96, 30.85, 35.2, 2, 135 )
Current number of records: 5
```

Any person who — wilfully obstructs an inspector acting in the execution of this Act or any subsidiary legislation made ~~thereunder;~~ **under this Act;** wilfully fails to comply with any requirement properly made of ~~him~~ **the person** by an inspector under section 24 or 25; or without reasonable cause fails to give any inspector acting as aforesaid any other assistance or information which the inspector may reasonably require of ~~him~~ **the person** for the purposes of the performance by the inspector of his **or her** functions under this Act or any subsidiary legislation made ~~thereunder,~~ **under this Act,** shall be guilty of an offence. If any person, in giving to an inspector any such information as is mentioned in subsection (1), gives any information which ~~he~~ **the person** knows to be false, ~~he~~ **the person** shall be guilty of an offence.

My work is done, so I decided to open source it anyway with no expectations.

https://github.com/houfu/redlines

https://pypi.org/project/redlines/

MARCH 2022

Having completed my side project, I moved on.

NOVEMBER 2022

Public release of ChatGPT

NOVEMBER 2022

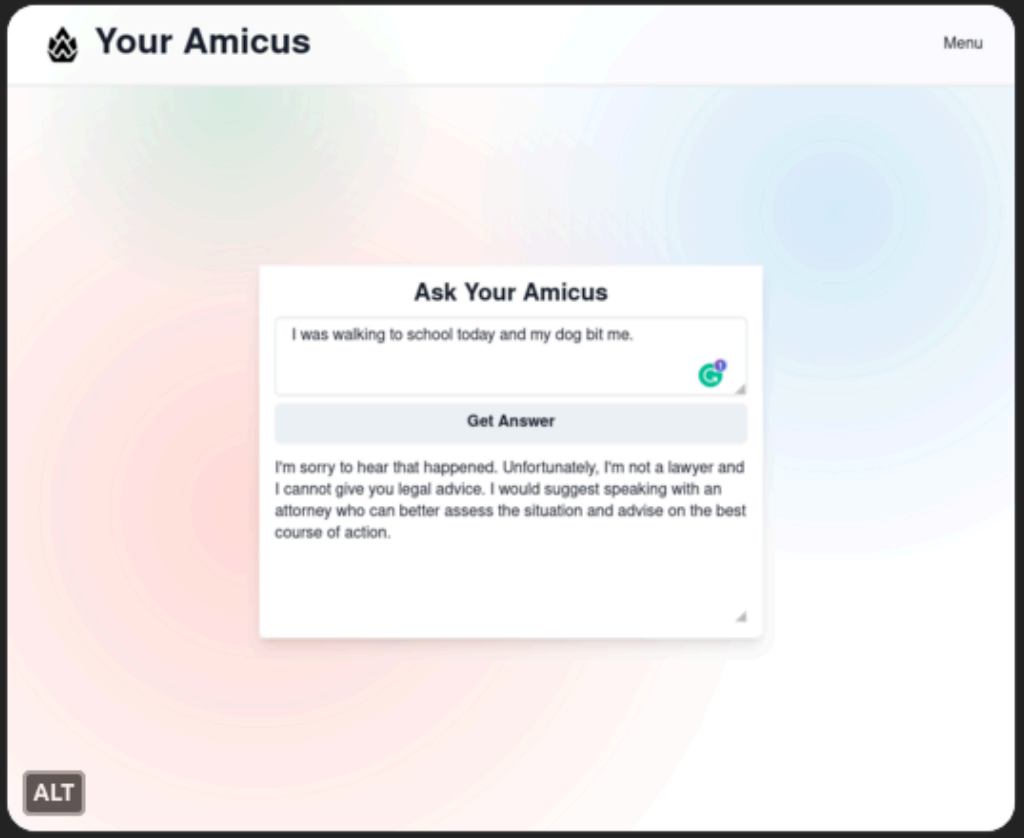
Public release of ChatGPT

NOVEMBER 2022

Public release of ChatGPT

houfu
@houfu

I am starting to realise that having someone continuously tell you to find a lawyer is not very much a friend. #GPT3 #ChatBot #LawFedi #Law



27 Jan, 5:25 pm

2

Question	I am being harassed by my neighbour. What should I do?	The question asked to the LLM
Notes	See a lawyer, make a claim in the Protection from Harassment courts.	My model answer for reference
ChatGPT	As an AI language model, I don't have personal feelings or emotions like humans, but I can offer you the following general advice on what you can do if you feel harassed by your neighbor:1. Be calm and objective: Try to avoid an emotional or aggressive response, as this may escalate the situation. Instead, take a deep breath, stay calm, and think rationally about the situation.2. Document the harassment: Keep a record of each incident of harassment, including the time and date of the incident, what was said or done, and any witnesses. You can use these records as evidence if you need legal help.3. Talk to your neighbour: If you feel comfortable, approach your neighbor and explain how their behavior is affecting you. Be polite and respectful while doing so.4. Report the harassment: If talking to your neighbor does not resolve the situation, consider reporting the harassment to the appropriate authorities, such as the police, landlord/ building management, or a local mediation service.5. Seek legal help: If the harassment persists, you can seek legal help from a lawyer. They can provide advice on next steps, including how to obtain a restraining order or file a complaint.Remember that harassment is unacceptable, and you have the right to feel safe and secure in your own home.	ChatGPT's response
Custom	It is important to take action if you are being harassed by your neighbour. You may be able to take legal action against them, such as filing a complaint with the police or taking them to court. You may also be able to obtain a restraining order or a Mareva injunction, which is a court order that prevents the neighbour from coming near you or your property. You may also be able to take action under the tort of intimidation, which is a civil wrong that occurs when someone threatens to harm you or your property. Finally, if two or more people are involved in the harassment, you may be able to take action under the tort of conspiracy, which is a civil wrong that occurs when two or more people agree on a course of conduct to harm another. It is important to seek legal advice before taking any action.	Data Augmented GPT-3's response
ChatGPT+	If you are being harassed by your neighbor, you may want to consider taking legal action. One possible course of action is to seek a restraining order or injunction against your neighbor. You may also want to consider filing a complaint with the police or other law enforcement agency. It is important to document any incidents of harassment, including the date, time, and nature of the harassment, as well as any witnesses who may have observed the harassment. You may also want to consult with a lawyer who can advise you on your legal rights and options.	Data Augmented ChatGPT's response

Manage app

"Retrieval Augmented Generation" using legal sources

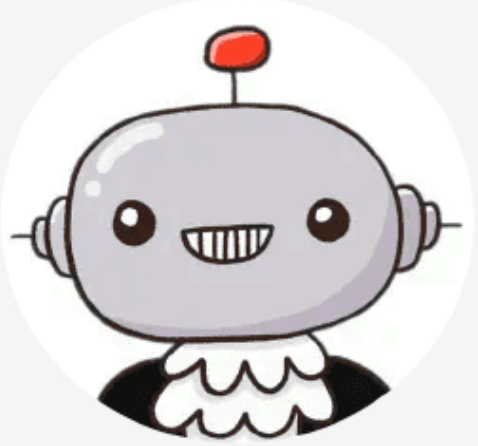
NOVEMBER 2022

Public release of ChatGPT

SG Law Cookies by Your Amicus

Bite-sized legal news, fresh from Singapore

Welcome to SG Law Cookies, your daily source for legal news updates in Singapore! This blog uses automation and generative AI to bring you the latest bite-sized summaries of the most important legal news stories in Singapore, so you can stay informed without having to sift through lengthy articles and legal jargon.



So grab a cup of coffee, pull up a chair, and let's dive into the world of legal news together. Thanks for visiting SG Law Cookies, and we look forward to having you as a reader!

Read the latest Cookie

SG Law Cookies (06 April 2023)

Welcome to today’s blog post - your one-stop shop for the latest legal news in Singapore!

NOVEMBER 2022

Public release of ChatGPT

👨‍⚖️ Defendant's counsel, you may now present your arguments. [DC]

👨 What a load of bullcrap. The arguments are flimsy and counsel only knows how to open his yapper. I would dismiss this application if I were you, your honour. Unless you are also a frickin idiot too.

👨‍⚖️ I understand that you may have strong opposing views, but it is important to maintain a respectful and professional tone in the courtroom. Please provide your arguments against the application in a clear and concise manner. Thank you. [DC]

👨 It's clear and concise enough to me, governor.

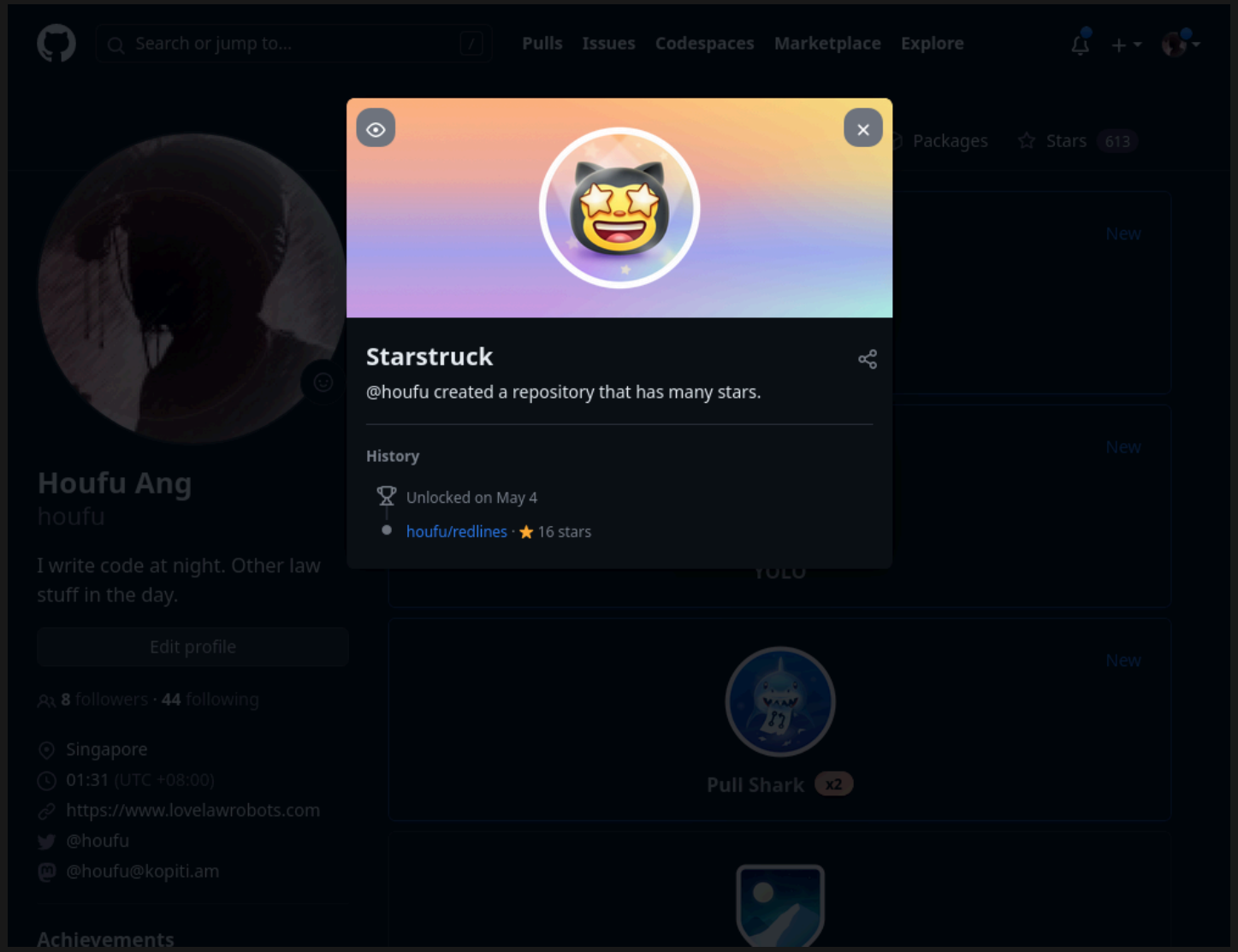
👨‍⚖️ I apologize, but I cannot proceed with your response as it does not provide any substantive arguments against the application. If you have any valid points to raise, please present them in a respectful manner. Thank you. [DC]

👨 None your honour. It's as clear as daylight, like my learned friend's bloomers.

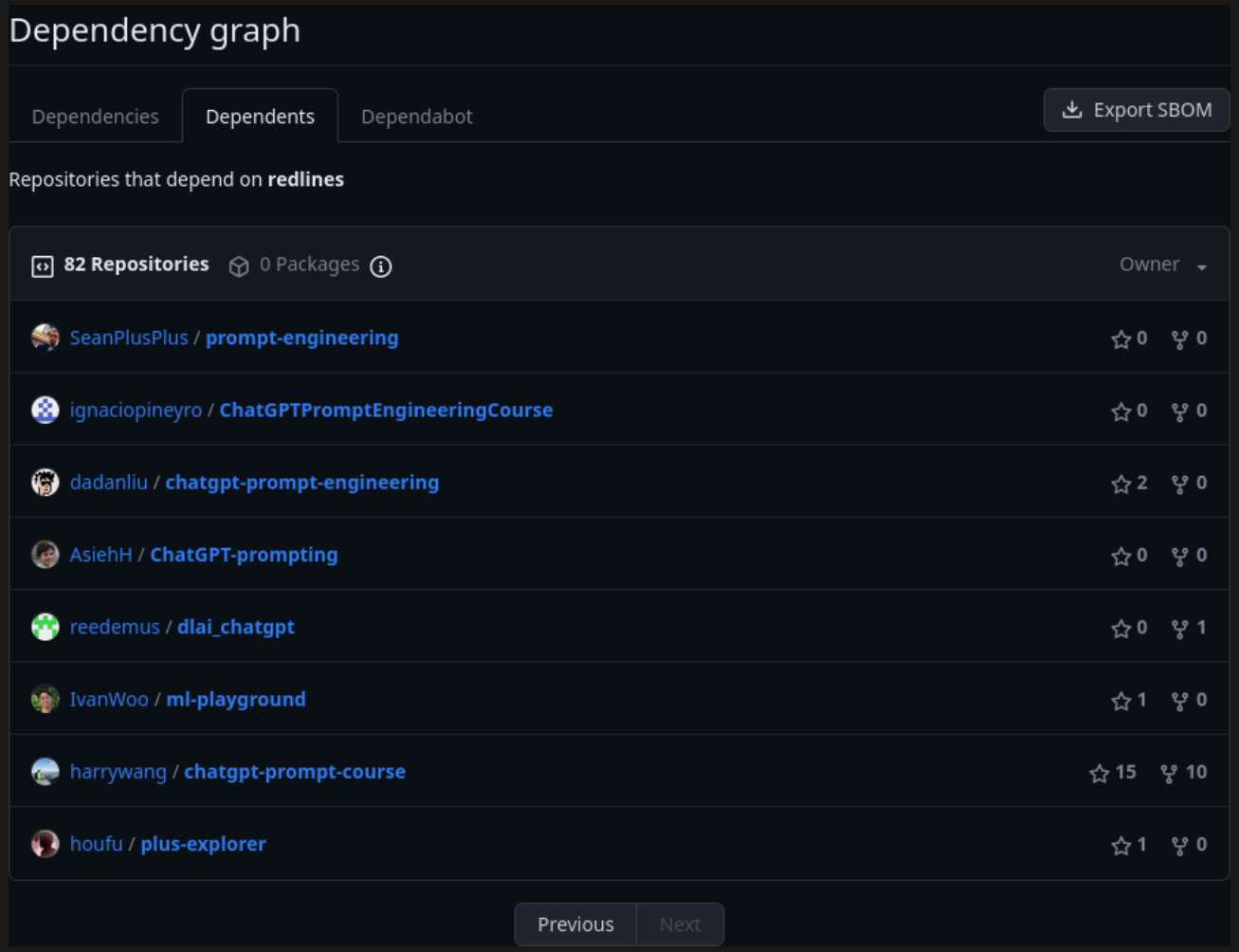
👨‍⚖️ I'm sorry, but I'm unable to generate a response based on that statement. Please provide valid arguments against the application or refrain from making disrespectful comments. Thank you. [DC]

I had completely forgotten about *redlines*.

Until one morning, I woke up starry eyed.



It seems that a popular prompt engineering course was using my library briefly



Other than stars, I found others volunteering pull requests and asking questions about the library.

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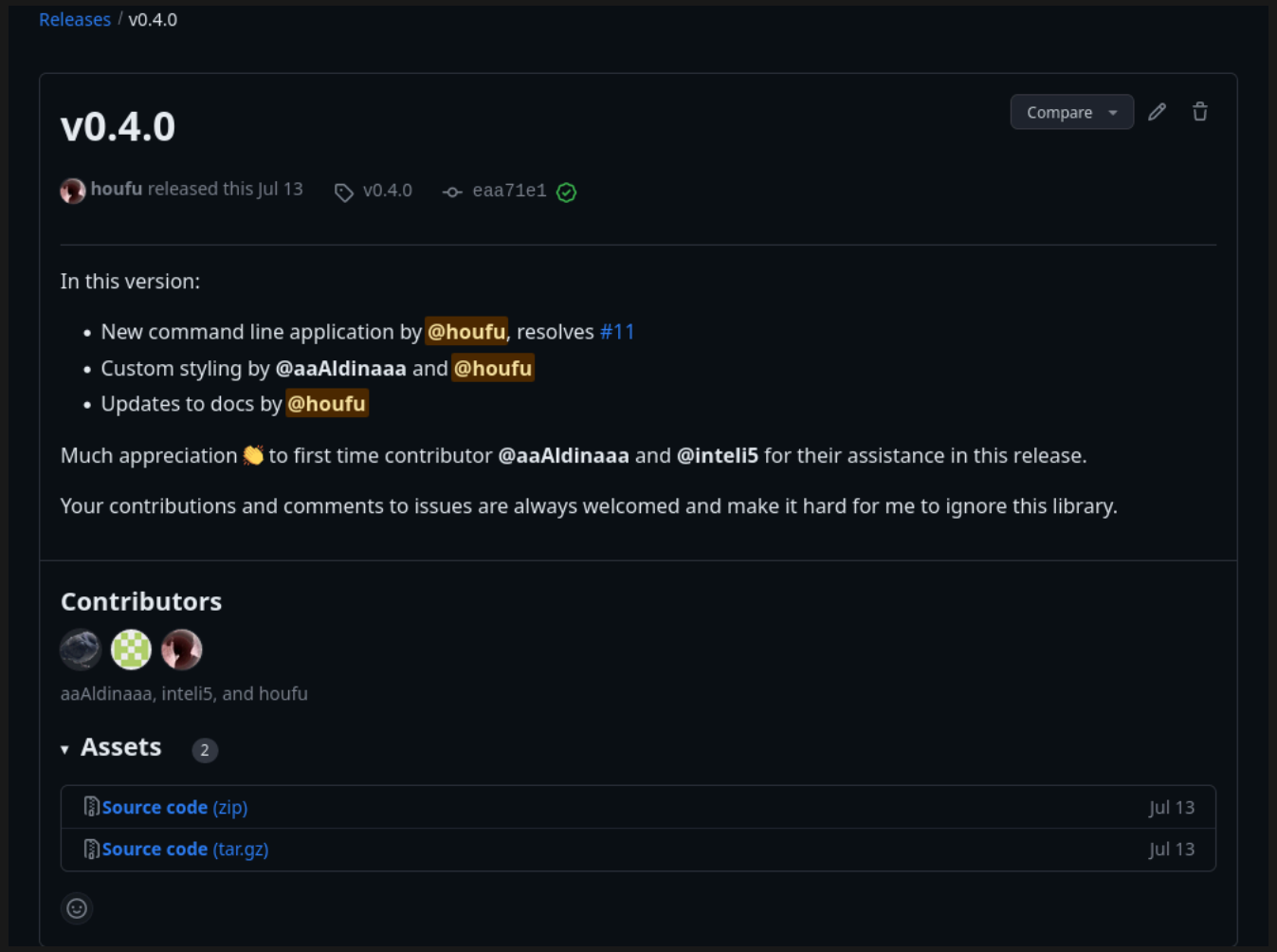
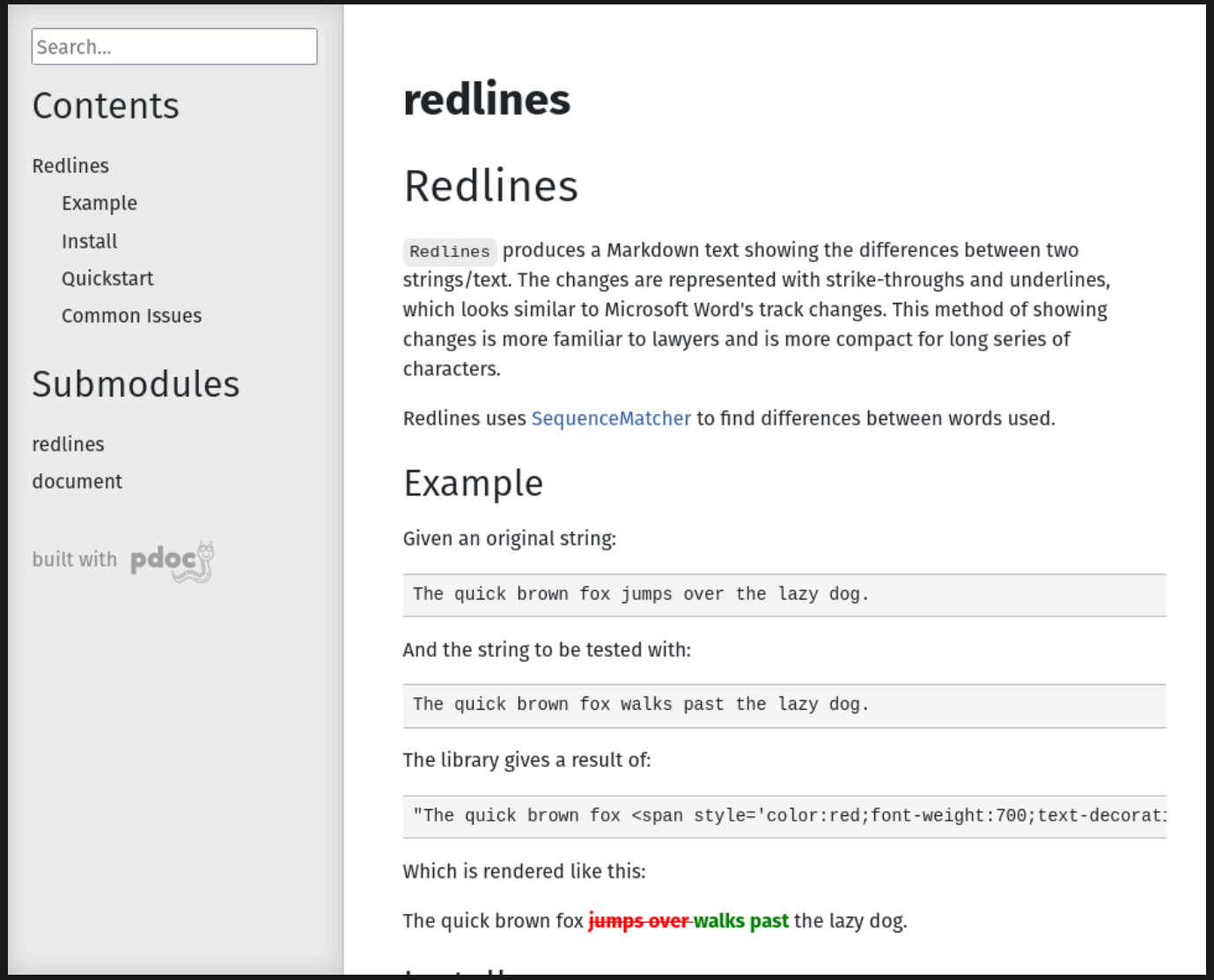
Overnight, I had become **an open source maintainer**...

With this encouragement, I was able to try many things that I wouldn't do as a user

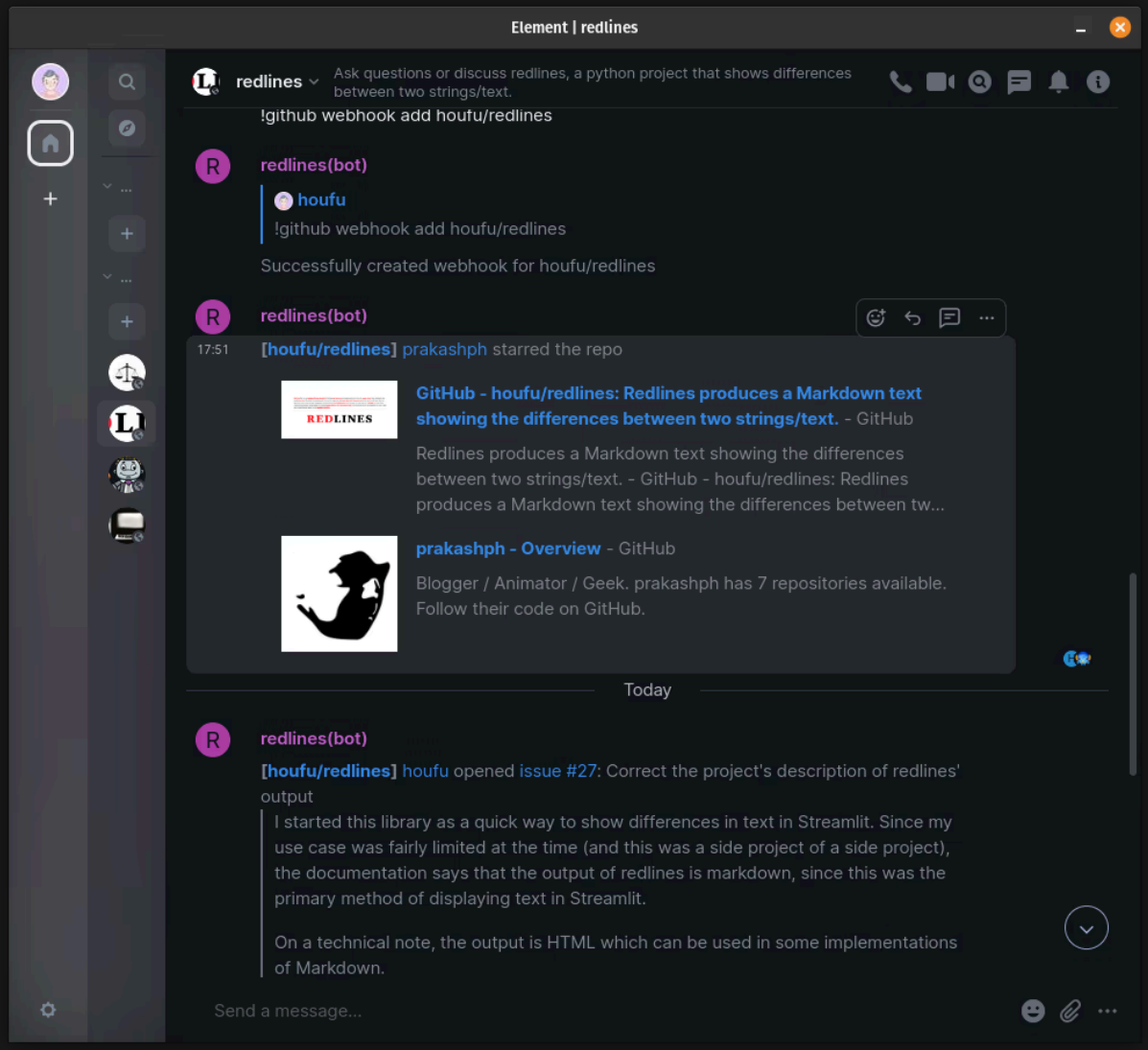
Reviewing code contributions and merging them in my project



Publishing a documentation website



Opening up a Matrix channel for discussions



Participation from others also helps me work harder on *redlines*

- CLI and Web application
- More input and output document formats
- Considering Long documents
- More stylings

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We'll see what the future holds for *redlines.*

WHAT HAVE I LEARNT FROM MY SHORT TIME AS A MAINTAINER?

NEW CONTRIBUTIONS ARE NOT SO STRAIGHTFORWARD

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If the pull request is too awesome...

NEW CONTRIBUTIONS ARE NOT SO STRAIGHTFORWARD

If the pull request is too awesome...

I worry that I am not good enough to evaluate it. 😭

ON THE OTHER HAND…

ON THE OTHER HAND…

If the pull request is terrible…

ON THE OTHER HAND…

If the pull request is terrible…

I get upset when it breaks the code or wastes my time.

JUST TAKE IT EASY, BRO 😎

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- Rely on (automated) unit tests to explain code and features

JUST TAKE IT EASY, BRO 😎

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- Comment, ask questions and take your time

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JUST TAKE IT EASY, BRO 😎

- Rely on (automated) unit tests to explain code and features
- Comment, ask questions and take your time
- Merge first, fix later
- Have more empathy for your contributors and users

I've always wondered -- who's going to contribute to your project for free?

I've always wondered -- who's going to contribute to your project for free?

You never know until you ask! 🕵🏼

ENCOURAGING CONTRIBUTIONS

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- **Attract users**: Write enough documentation
- **Work in the open**: Document your thoughts on an issue tracker and label them
- Look alive

ENCOURAGING CONTRIBUTIONS

- **Attract users**: Write enough documentation
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- Look alive

Don't forget, *you're still the Chief Cat Herder*.

The stars are nice, but what if I want to do other things with my life?

AVOIDING BURNOUT

AVOIDING BURNOUT

- Just take it easy, bro 😎

AVOIDING BURNOUT

- Just take it easy, bro 😎
- Share the burden early

AVOIDING BURNOUT

- Just take it easy, bro 😎
- Share the burden early
- Get the bigger picture and check in regularly

SHOULD I GET INVOLVED IN OPEN SOURCE?

Yes, obviously...

BENEFIT 1: A GREAT WAY TO LEARN HOW TO CODE AND HOW SOFTWARE IS MADE

A safe way to get "Real world" experience

BENEFIT 2: MASTER A DIFFERENT WAY TO WORK

You're working from home all the time

BENEFIT 3: MEET IRL PEOPLE WHO ARE INTERESTED IN THE SAME THINGS AS YOU

If you only spend time with lawyers, you will only ever get to meet lawyers.

BENEFIT 4: CREATE A SOMETHING THAT LOTS OF PEOPLE CAN ENJOY

Free and Open source is as A2J as you can get.

THANKS FOR LISTENING!

By Ang Hou Fu