

Watching the Weather With Github Actions

John Keefe

The New York Times

bit.ly/nicar25-weather

*If you don't have an Github account, make a free one now at
github.com*

Today's workshop

- Learn about the Weather Service API
- Make your own copy of my code to take home
- Learn about Github Actions
- Learn about Github Codespaces
- Set up Slack to get messages
- Set up Github with the settings you need
- Make it go

Notes, links & code

bit.ly/nicar25-weather



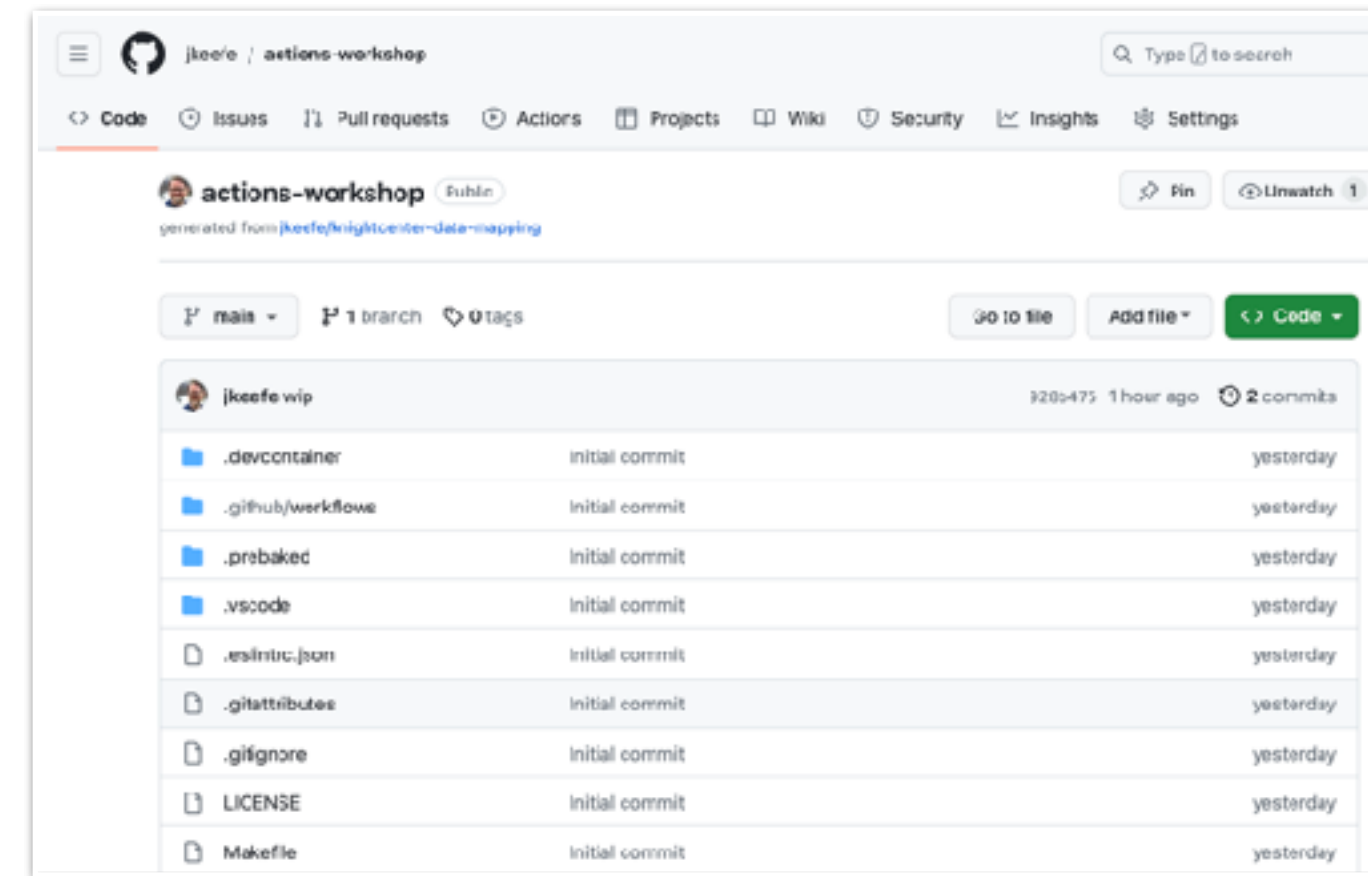
Github

bit.ly/nicar25-weather

Repository

jkeefe/weather-newsrooms-nicar25

Weather Service



Slack





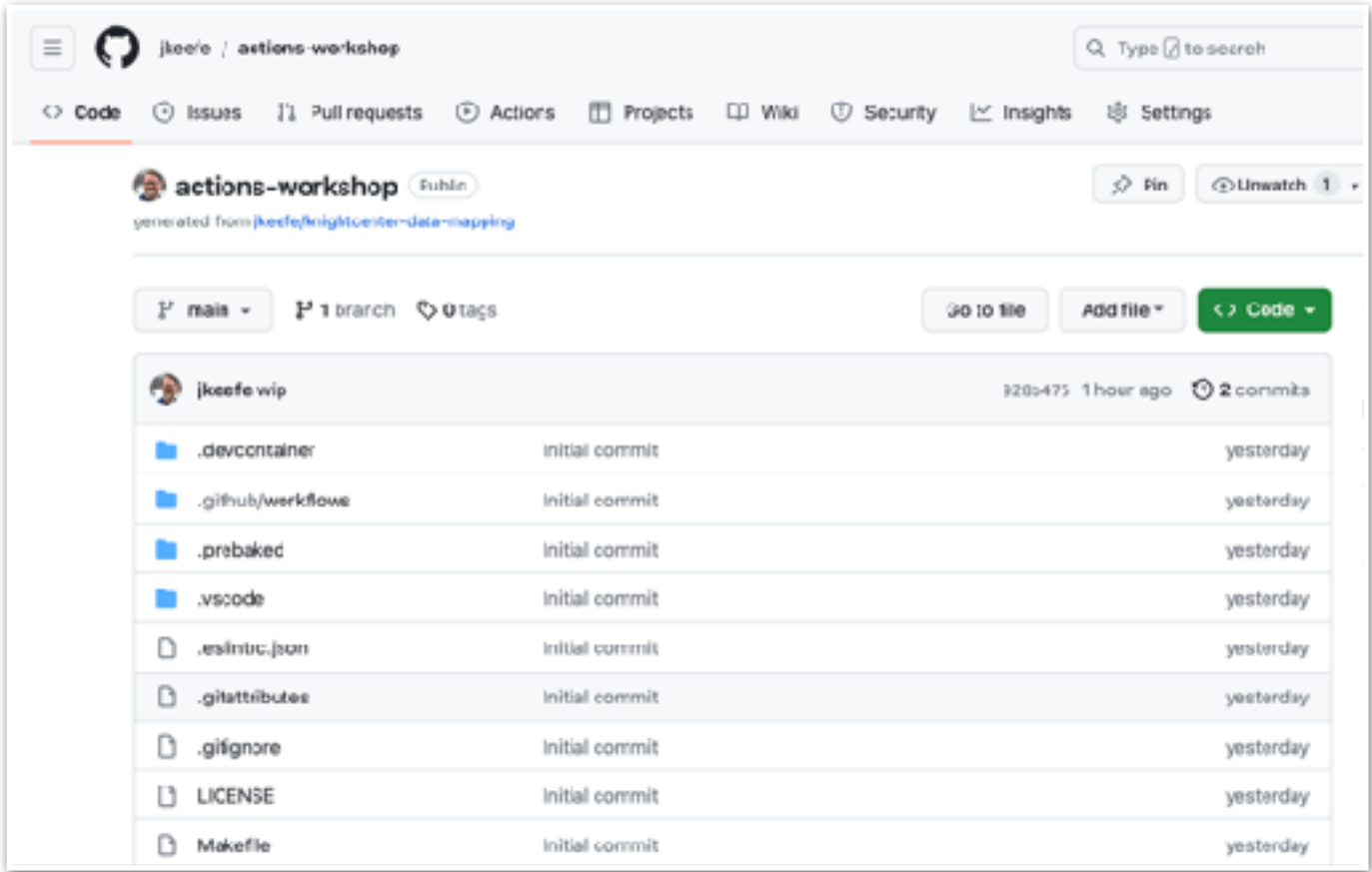
Github

bit.ly/nicar25-weather

Repository

jkeefe/weather-newsrooms-nicar25

Weather Service

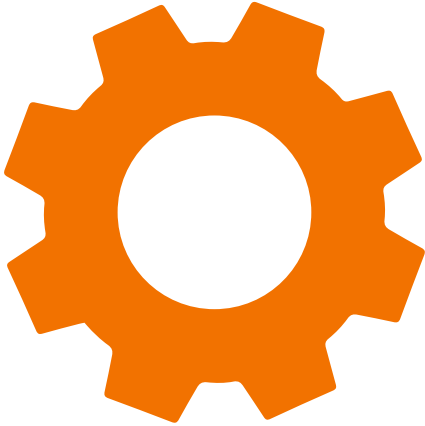



Slack



```
- properties: {
  @id:
    "https://api.weather.gov/alerts/urn:oid:2.49.0.1.840.0.d98069872072e35fb220272617b5d049d649ecd7.001.2",
  @type: "wx:Alert",
  id: "urn:oid:2.49.0.1.840.0.d98069872072e35fb220272617b5d049d649ecd7.001.2",
  areaDesc: "Osceola; O'Brien; Cherokee; Woodbury; Lyon; Murray; Nobles",
+ geocode: { ... },
+ affectedZones: [ ... ],
  references: [ ],
  sent: "2025-03-05T11:35:00-06:00",
  effective: "2025-03-05T11:35:00-06:00",
  onset: "2025-03-05T11:35:00-06:00",
  expires: "2025-03-05T18:00:00-06:00",
  ends: "2025-03-05T18:00:00-06:00",
  status: "Actual",
  messageType: "Alert",
  category: "Met",
  severity: "Moderate",
  certainty: "Likely",
  urgency: "Expected",
  event: "Winter Weather Advisory",
  sender: "w-nws.webmaster@noaa.gov",
  senderName: "NWS Sioux Falls SD",
  headline: "Winter Weather Advisory issued March 5 at 11:35AM CST until March 5 at 6:00PM CST by NWS Sioux Falls SD",
  description: "* WHAT...Areas of blowing snow. Winds gusting as high as 45 mph.


* WHERE...Portions of northwest and west central Iowa and southwest Minnesota.
```





Warnings Bot

APP 3:29 PM





Winter Weather Advisory

Winter Weather Advisory issued March 5 at 11:35AM CST until March 5 at 6:00PM CST by NWS Sioux Falls SD

Locations/counties included: Osceola; O'Brien; Cherokee; Woodbury; Lyon; Murray; Nobles

Warning time: 2025-03-05T11:35:00-06:00

See thread  for details ...



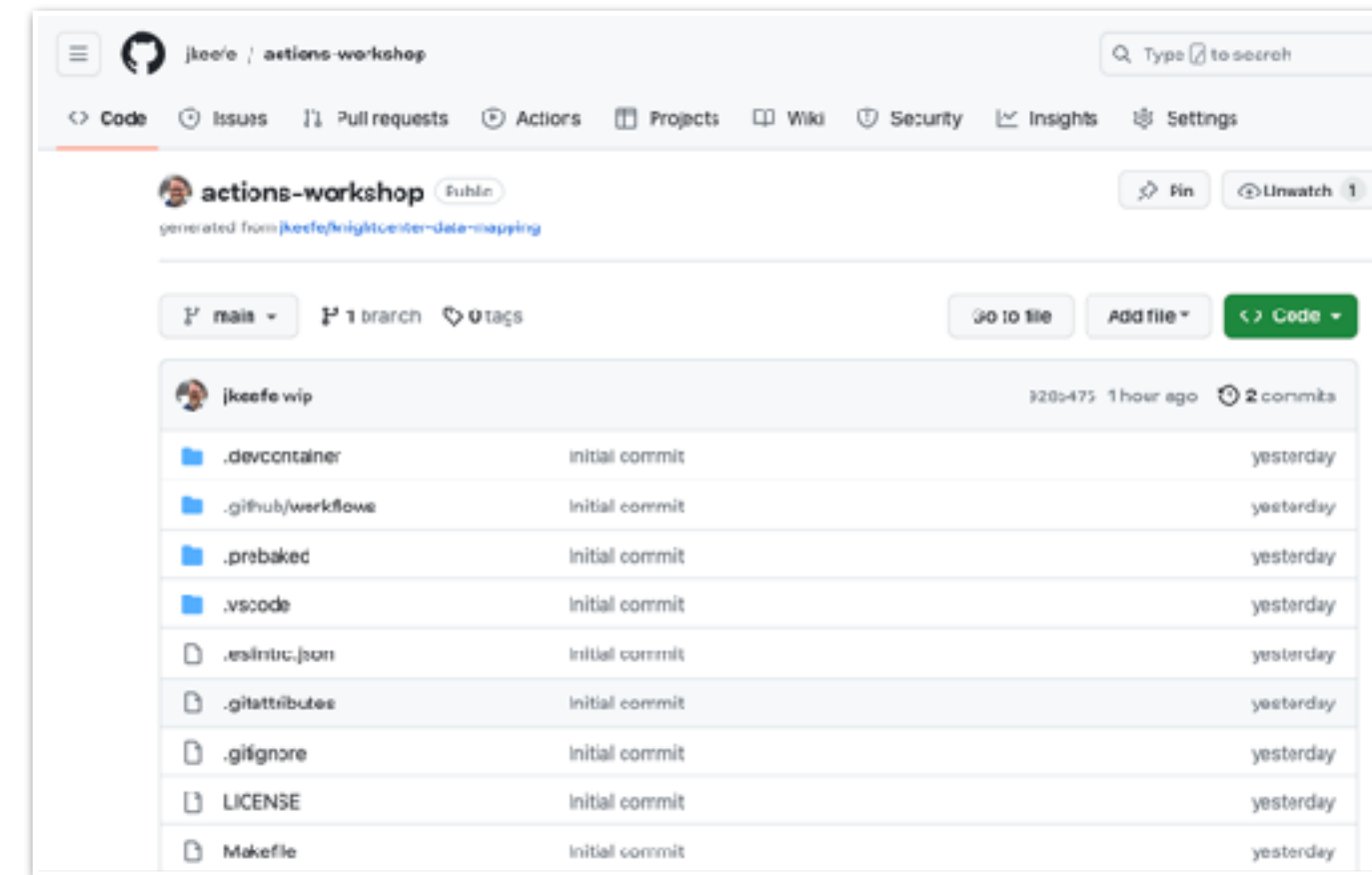
1 reply Today at 3:29 PM



bit.ly/nicar25-weather

Repository

jkeefe/weather-newsrooms-nicar25



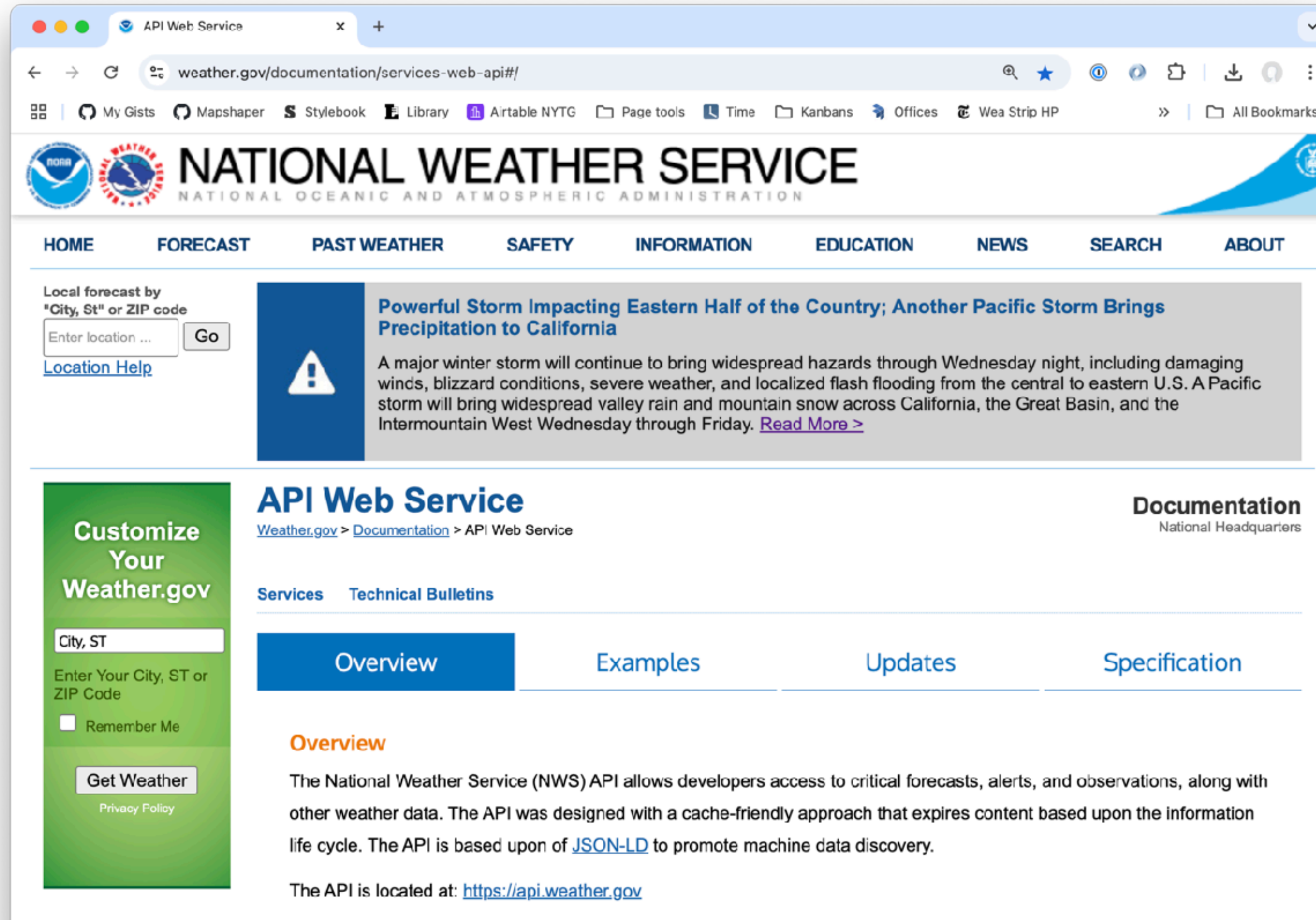
Slack



Weather Service API

<https://www.weather.gov/documentation/services-web-api>

Weather Service API



The screenshot shows a web browser window displaying the National Weather Service (NWS) API documentation page. The browser's address bar shows the URL `weather.gov/documentation/services-web-api#`. The page features the NWS logo and a navigation menu with links to HOME, FORECAST, PAST WEATHER, SAFETY, INFORMATION, EDUCATION, NEWS, SEARCH, and ABOUT. A prominent alert banner at the top right discusses a powerful storm impacting the eastern half of the country. On the left, there is a 'Customize Your Weather.gov' sidebar with a search input field and a 'Get Weather' button. The main content area is titled 'API Web Service' and includes a breadcrumb trail: `Weather.gov > Documentation > API Web Service`. Below this, there are tabs for 'Services' and 'Technical Bulletins', and a sub-navigation bar with links to 'Overview', 'Examples', 'Updates', and 'Specification'. The 'Overview' section is currently active, providing an introduction to the NWS API and its purpose.

NATIONAL WEATHER SERVICE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION

HOME FORECAST PAST WEATHER SAFETY INFORMATION EDUCATION NEWS SEARCH ABOUT

Local forecast by "City, St" or ZIP code
Enter location ... Go
[Location Help](#)

Powerful Storm Impacting Eastern Half of the Country; Another Pacific Storm Brings Precipitation to California
A major winter storm will continue to bring widespread hazards through Wednesday night, including damaging winds, blizzard conditions, severe weather, and localized flash flooding from the central to eastern U.S. A Pacific storm will bring widespread valley rain and mountain snow across California, the Great Basin, and the Intermountain West Wednesday through Friday. [Read More >](#)

API Web Service
[Weather.gov](#) > [Documentation](#) > API Web Service

Documentation
National Headquarters

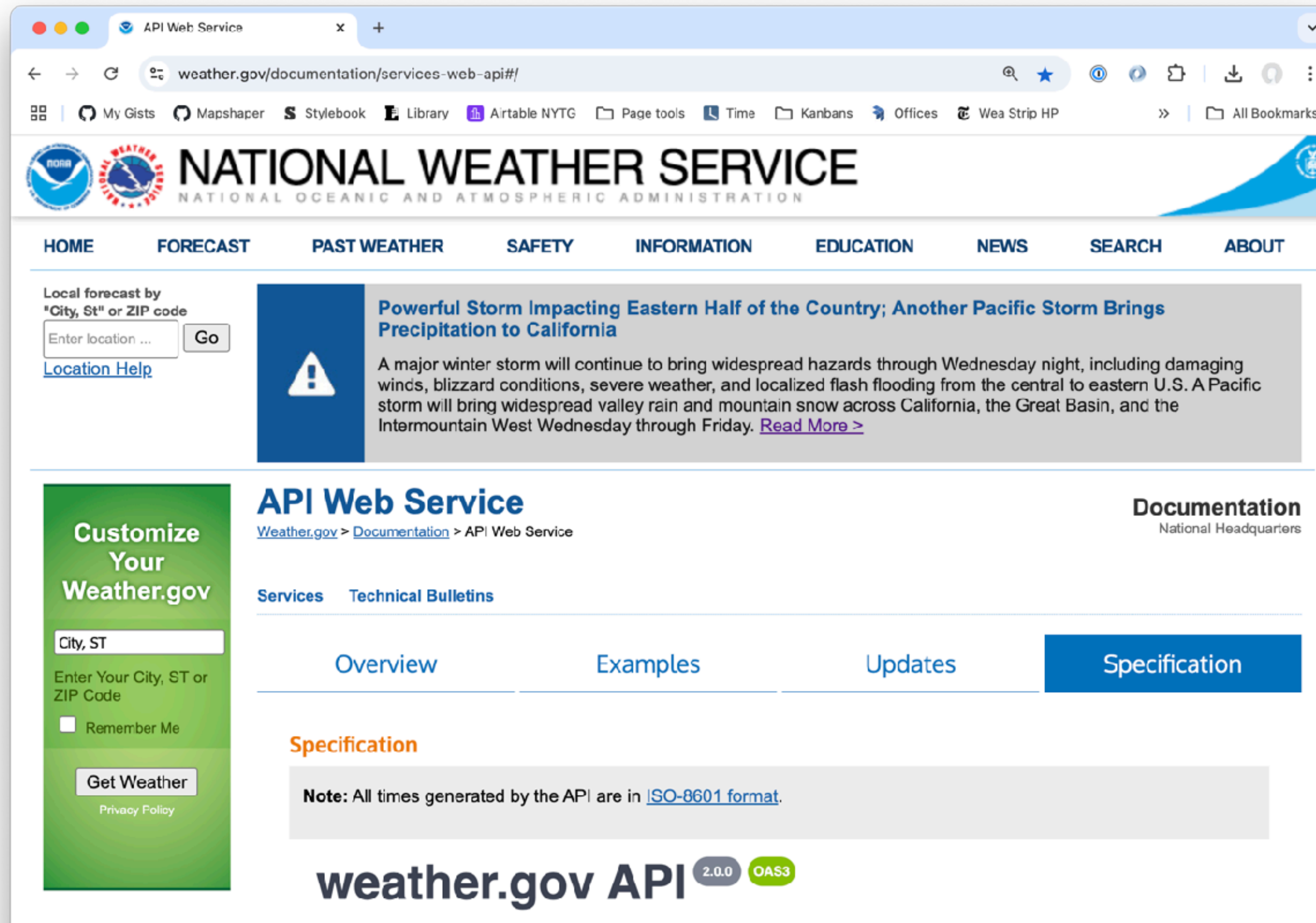
Services Technical Bulletins

Overview Examples Updates Specification

Overview
The National Weather Service (NWS) API allows developers access to critical forecasts, alerts, and observations, along with other weather data. The API was designed with a cache-friendly approach that expires content based upon the information life cycle. The API is based upon of [JSON-LD](#) to promote machine data discovery.

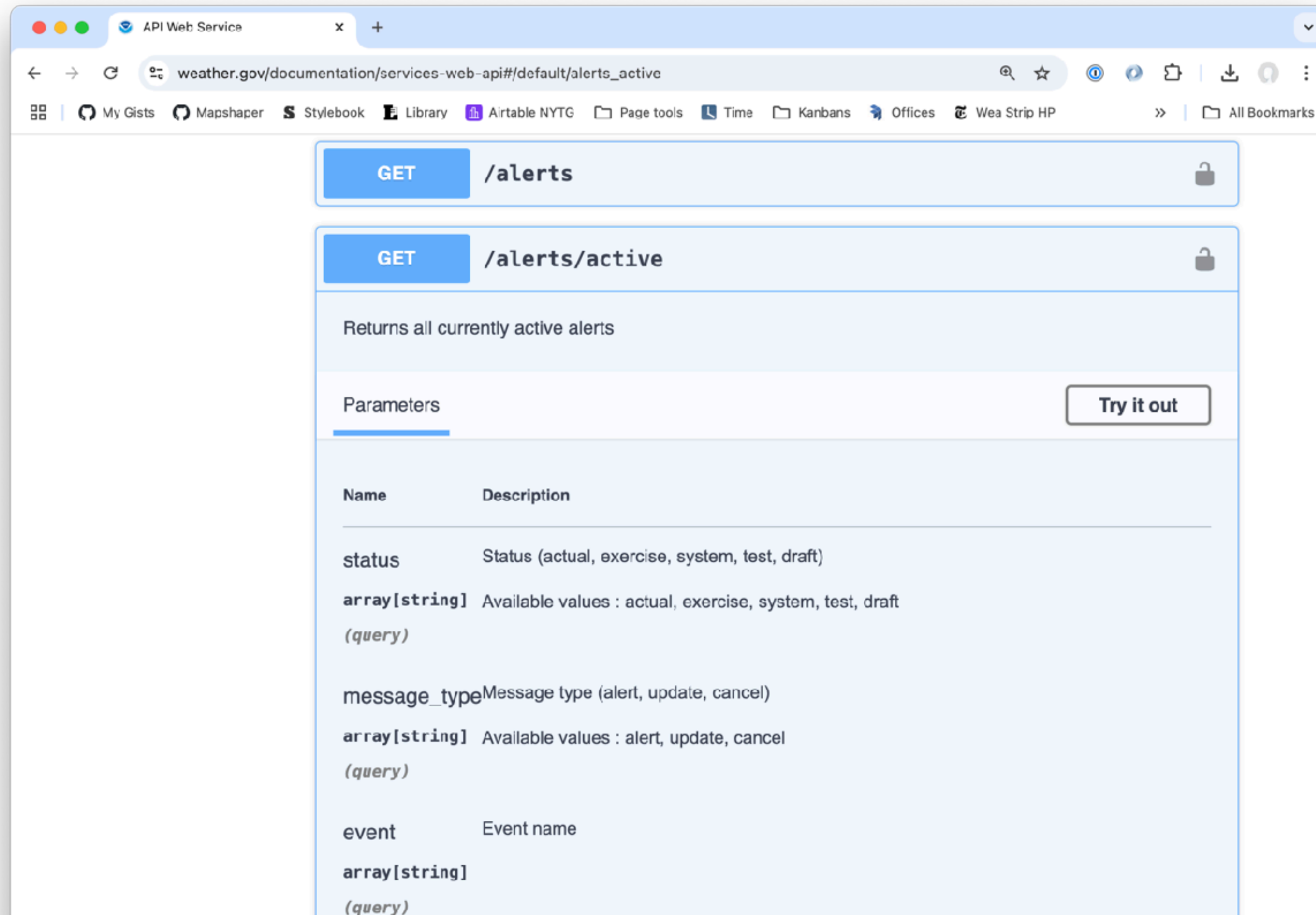
The API is located at: <https://api.weather.gov>

Weather Service API



The screenshot shows a web browser window with the URL `weather.gov/documentation/services-web-api#`. The page is the National Weather Service API documentation. At the top, there's a navigation bar with links: HOME, FORECAST, PAST WEATHER, SAFETY, INFORMATION, EDUCATION, NEWS, SEARCH, and ABOUT. Below this, there's a section for "Local forecast by 'City, St' or ZIP code" with a text input field and a "Go" button. To the right of this is a warning box titled "Powerful Storm Impacting Eastern Half of the Country; Another Pacific Storm Brings Precipitation to California" with a blue background and a white exclamation mark icon. Below the warning box, there's a section for "API Web Service" with a breadcrumb trail: `Weather.gov > Documentation > API Web Service`. To the right of this section is a "Documentation" link with the text "National Headquarters". Below the "API Web Service" section, there are two tabs: "Services" and "Technical Bulletins". Under "Services", there are four buttons: "Overview", "Examples", "Updates", and "Specification". The "Specification" button is highlighted in blue. Below the "Specification" button, there's a note: "Note: All times generated by the API are in [ISO-8601 format](#)." At the bottom of the page, there's a footer that says "weather.gov API" followed by "2.0.0" and "OAS3" in a green box. On the left side of the page, there's a green sidebar with the text "Customize Your Weather.gov" and a form with a text input field labeled "City, ST", a "Get Weather" button, and a "Privacy Policy" link.

Weather Service API



The screenshot shows a web browser window with the URL `weather.gov/documentation/services-web-api#/default/alerts_active`. The page displays the API endpoint `GET /alerts/active` with a description: "Returns all currently active alerts". Below the description, there is a "Parameters" section with a "Try it out" button. The parameters are listed in a table:

Name	Description
<code>status</code>	Status (actual, exercise, system, test, draft)
<code>array[string]</code> (query)	Available values : actual, exercise, system, test, draft
<code>message_type</code>	Message type (alert, update, cancel)
<code>array[string]</code> (query)	Available values : alert, update, cancel
<code>event</code>	Event name
<code>array[string]</code> (query)	

Weather Service API

<https://api.weather.gov/alerts/active?status=actual&area=MN>

Weather Service API

<https://api.weather.gov/alerts/active?status=actual&area=MN>

Weather Service API

<https://api.weather.gov/alerts/active?status=actual&area=MN>

Weather Service API

<https://api.weather.gov/alerts/active?status=actual&area=MN>

Weather Service API

<https://api.weather.gov/alerts/active?status=actual&area=MN>

Weather Service API

<https://api.weather.gov/alerts/active?status=actual&area=MN>

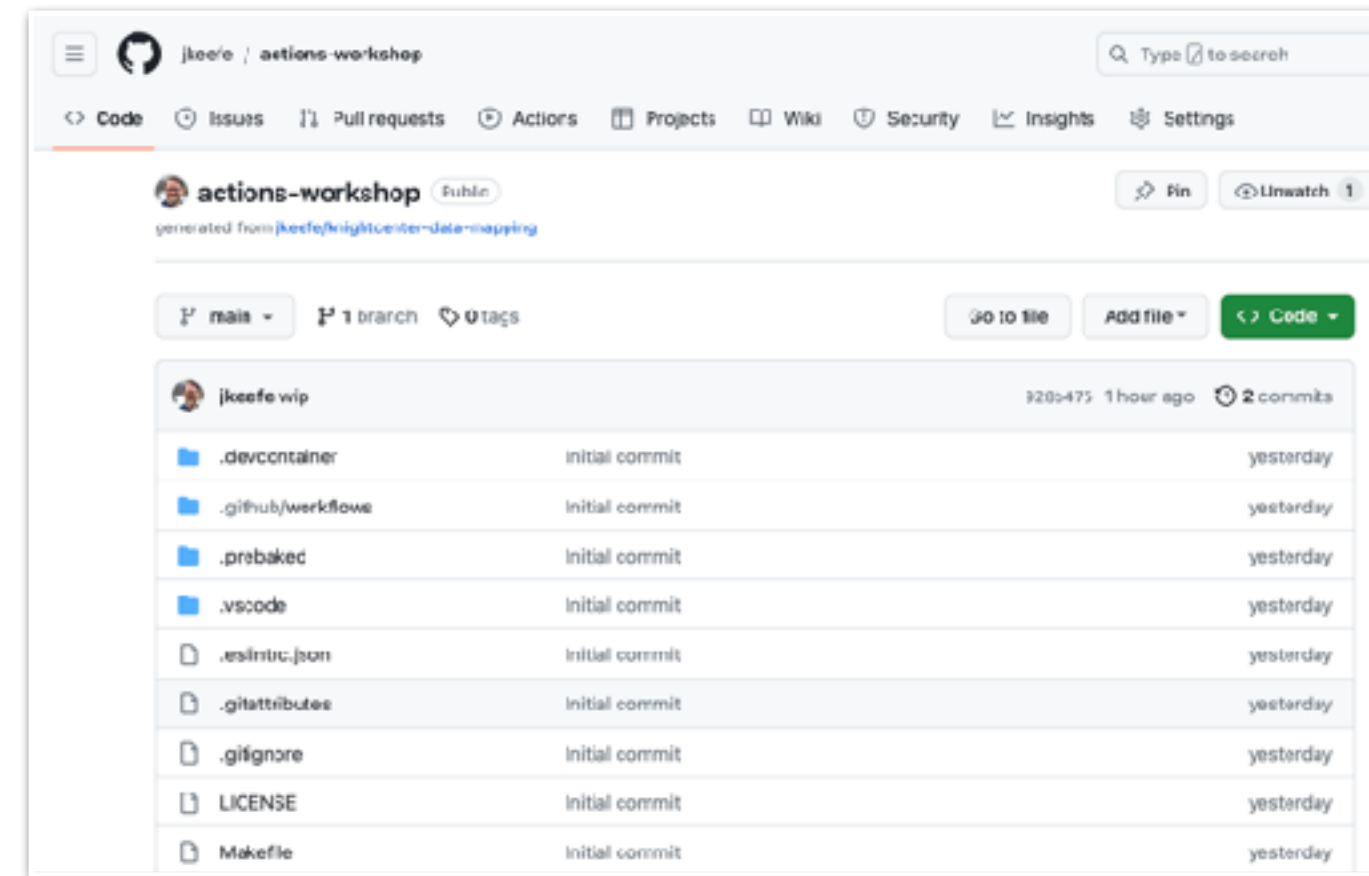
```
- features: [
  - {
    id: "https://api.weather.gov/alerts/urn:oid:2.49.0.1.840.0.d98069872072e35fb220272617b5d049d649ecd7.002.1",
    type: "Feature",
    geometry: null,
    - properties: {
      @id: "https://api.weather.gov/alerts/urn:oid:2.49.0.1.840.0.d98069872072e35fb220272617b5d049d649ecd7.002.1",
      @type: "wx:Alert",
      id: "urn:oid:2.49.0.1.840.0.d98069872072e35fb220272617b5d049d649ecd7.002.1",
      areaDesc: "Sioux; Plymouth; Lincoln; Dixon; Dakota; Union",
      + geocode: { ... },
      + affectedZones: [ ... ],
      + references: [ ... ],
      sent: "2025-03-05T11:35:00-06:00",
      effective: "2025-03-05T11:35:00-06:00",
      onset: "2025-03-05T11:35:00-06:00",
      expires: "2025-03-05T12:45:00-06:00",
      ends: "2025-03-05T12:00:00-06:00",
      status: "Actual",
      messageType: "Update",
      category: "Met",
      severity: "Extreme",
      certainty: "Likely",
      urgency: "Expected",
      event: "Blizzard Warning",
      sender: "w-nws.webmaster@noaa.gov",
      senderName: "NWS Sioux Falls SD",
      headline: "Blizzard Warning issued March 5 at 11:35AM CST until March 5 at 12:00PM CST by NWS Sioux Falls SD",
      description: "Winds continue to weaken while visibilities improve this afternoon.",
      instruction: null,
      response: "Prepare",
      - parameters: {
        - AWIPSidentifier: [
          "WSWESD"
```

Weather Service



Repository

jkeefe/weather-newsrooms-nicar25



Slack





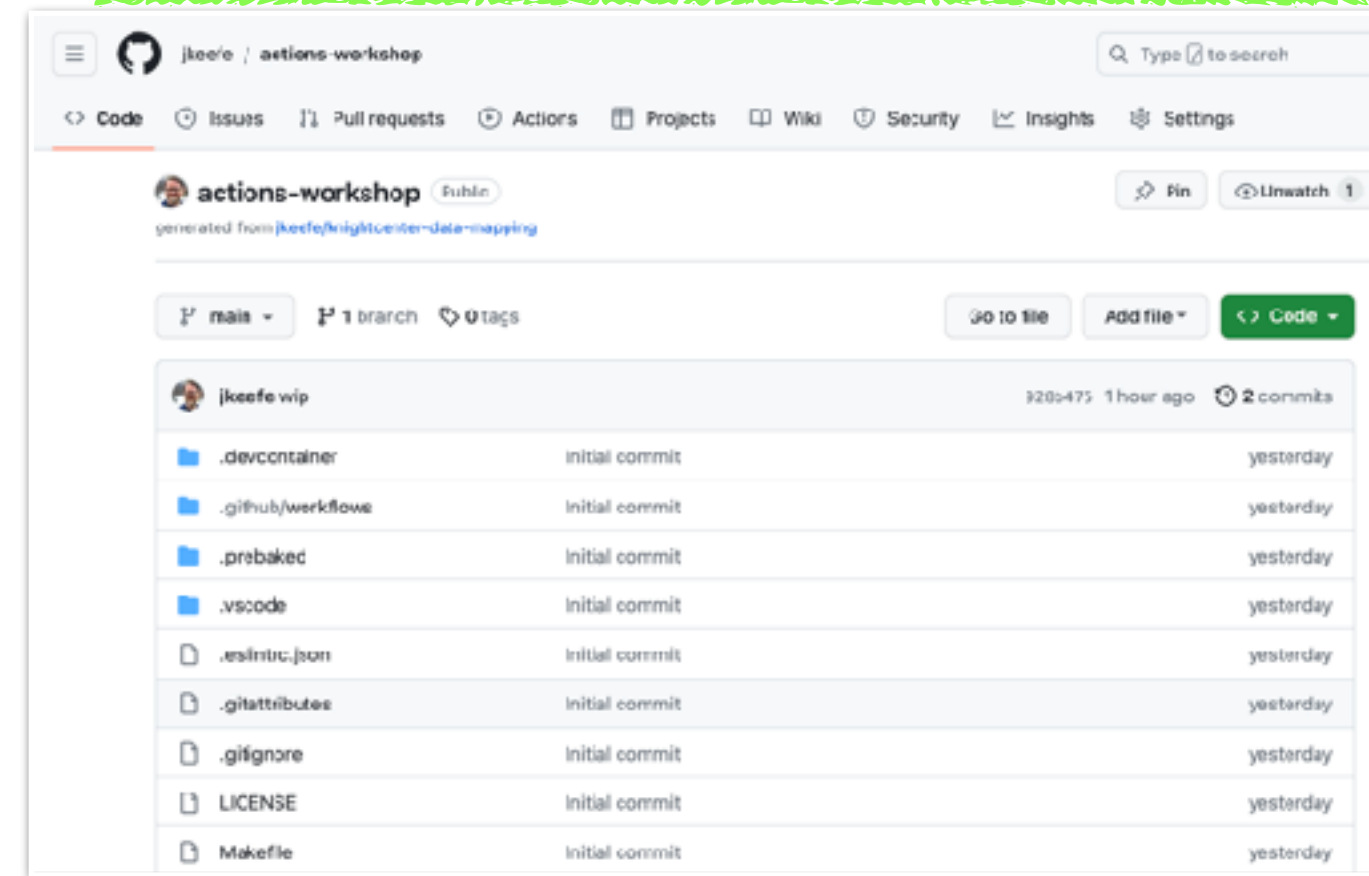
bit.ly/nicar25-weather

Weather Service



Repository

jkeefe/weather-newsrooms-nicar25



Slack



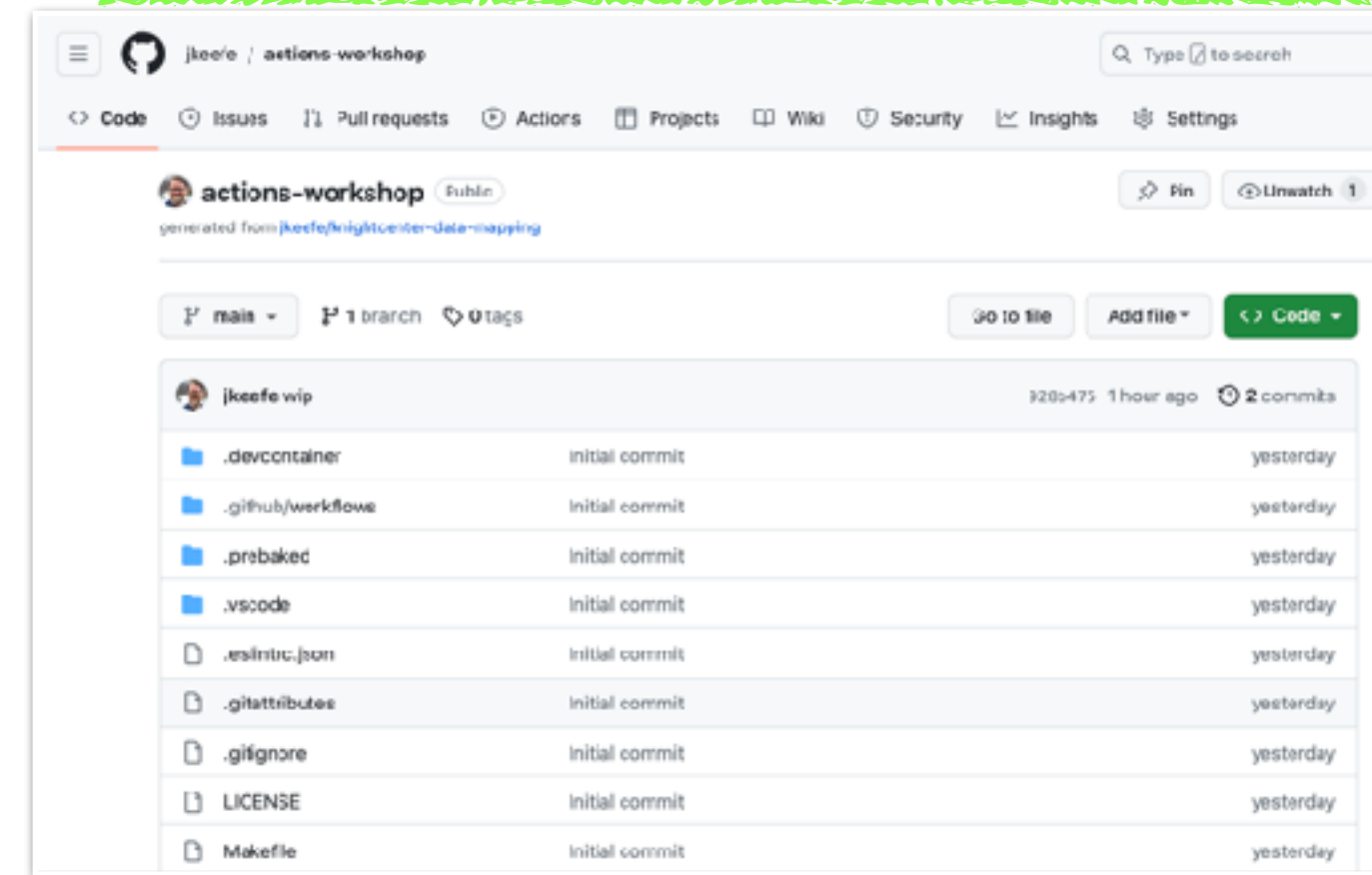


bit.ly/nicar25-weather

Repository

your-name/weather-newsrooms-nicar25

Weather Service



Slack



jkeefe/weather-newsrooms-nicar25

github.com/jkeefe/weather-newsrooms-nicar25

jkeefe / weather-newsrooms-nicar25

Type / to search

+

+

+

+

+

+

Code

Issues

Pull requests

Actions

Projects

Wiki

Security

Insights

Settings

weather-newsrooms-nicar25

Public

Unpin

Unwatch 1

Fork 0

Star 0

main

1 Branch

0 Tags

Go to file

Add file

Code

jkeefe

fixed weather.gov

fcfce5f · 6 months ago

10 Commits

.devcontainer	copied over nicar code	6 months ago
.github/workflows	wip	6 months ago
data	wip	6 months ago
.eslintrc.json	copied over nicar code	6 months ago
.gitignore	copied over nicar code	6 months ago
LICENSE	Initial commit	6 months ago
Makefile	added bitly links	6 months ago
README.md	fixed weather.gov	6 months ago
package-lock.json	wip	6 months ago

About

Code and links for a workshop at NICAR 2025 in Minneapolis

Readme

MIT license

Activity

0 stars

1 watching

0 forks

Releases


No releases published

Create a new release

Packages

No packages published

Publish your first package


jkeefe / weather-newsrooms-nicar25

Code

Issues

Pull requests

Actions


Projects

Wiki

Security

Insights

Settings


weather-newsrooms-nicar25
Public

Unpin

Unwatch 1

Fork 0

Star 0


main

1 Branch

0 Tags

Add file

Code


jkeefe fixed weather.gov

fcfce5f · 6 months ago

10 Commits

.devcontainer	copied over nicar code	6 months ago
.github/workflows	wip	6 months ago
data	wip	6 months ago
.eslintrc.json	copied over nicar code	6 months ago
.gitignore	copied over nicar code	6 months ago
LICENSE	Initial commit	6 months ago
Makefile	added bitly links	6 months ago
README.md	fixed weather.gov	6 months ago
package-lock.json	wip	6 months ago

About

Code and links for a workshop at NICAR 2025 in Minneapolis

Readme

MIT license

Activity

0 stars

1 watching

0 forks

Releases

No releases published
[Create a new release](#)

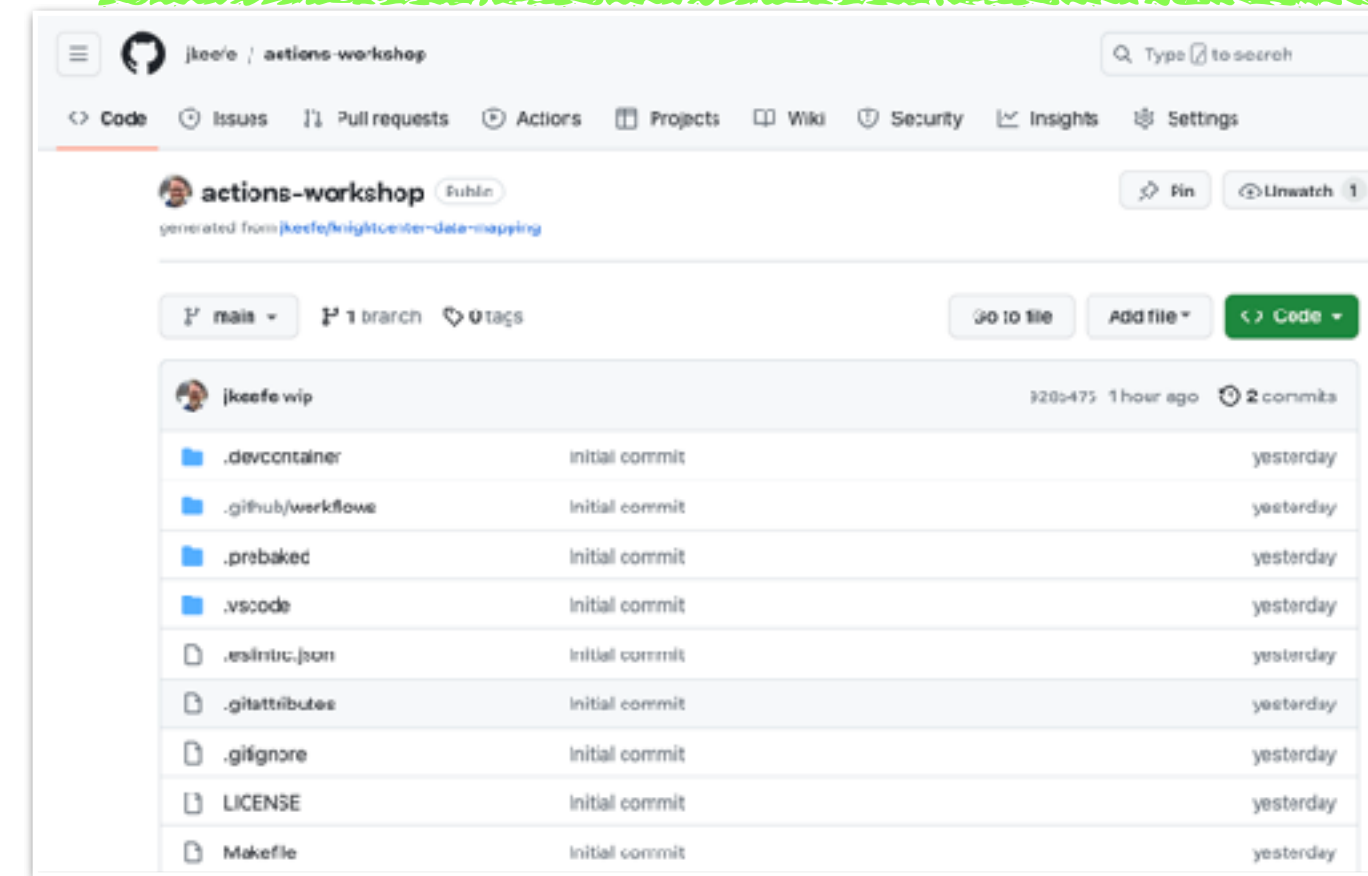
Packages

No packages published
[Publish your first package](#)

Repository

your-name/weather-newsrooms-nicar25

Weather Service



Slack





Github

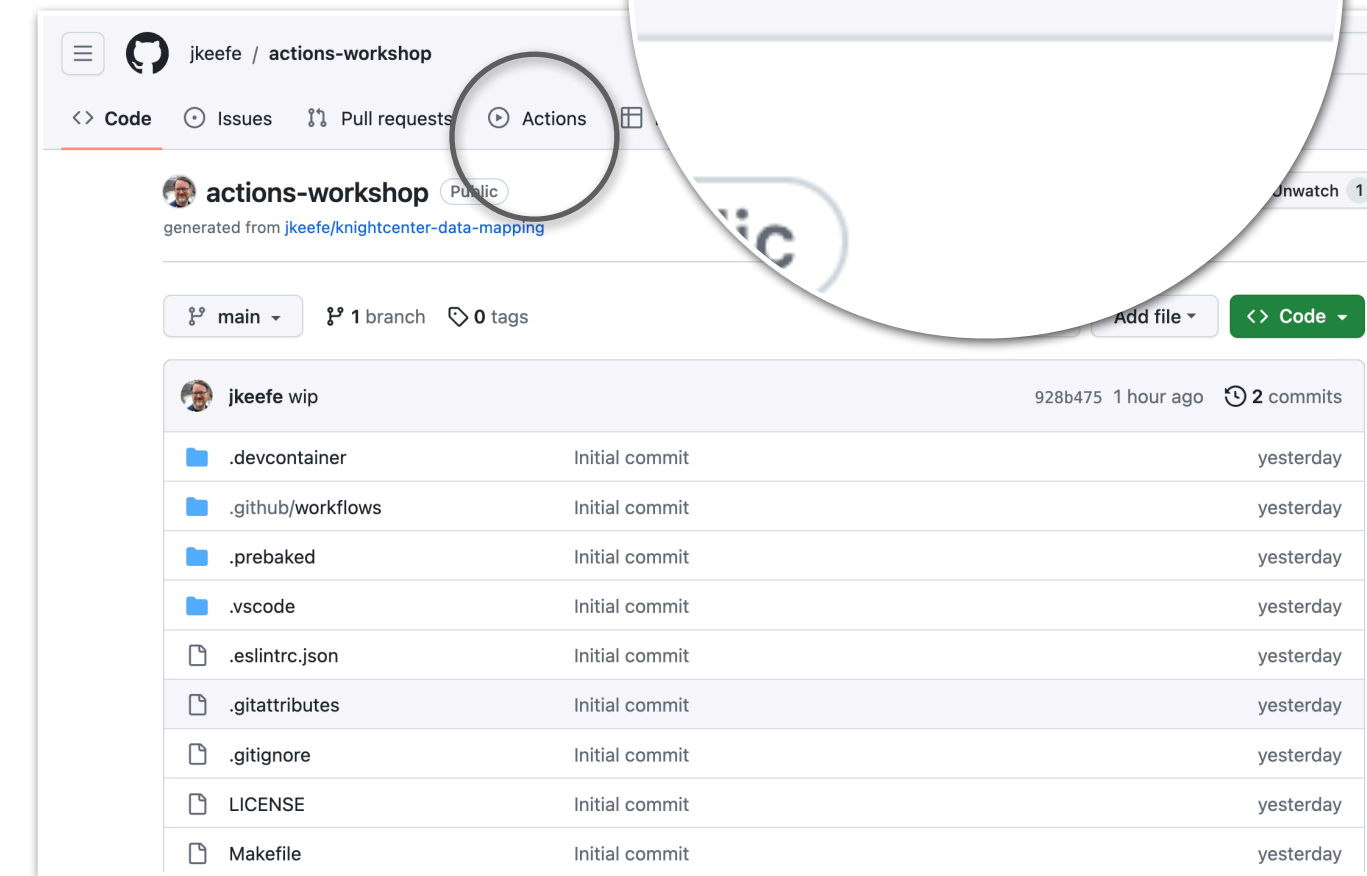
Rep

your-name/weat



Actions

C



Slack



bit.ly/nicar25-weather



Github

bit.ly/nicar25-weather

Repository

your-name/weather-newsrooms-nicar25

Weather Service



jkeefe / actions-workshop

Type to search

<> Code

Issues

Pull requests

Actions

Projects

Wiki

Security

Insights

Settings

actions-workshop

Public

generated from [jkeefe/knightcenter-data-mapping](#)

main

1 branch

0 tags

Go to file

Add file

<> Code

jkeefe wip

928b475 1 hour ago 2 commits

.devcontainer	Initial commit	yesterday
.github/workflows	Initial commit	yesterday
.prebaked	Initial commit	yesterday
.vscode	Initial commit	yesterday
.eslintrc.json	Initial commit	yesterday
.gitattributes	Initial commit	yesterday
.gitignore	Initial commit	yesterday
LICENSE	Initial commit	yesterday
Makefile	Initial commit	yesterday

Slack



Github

bit.ly/nicar25-weather

Repository

your-name/weather-newsrooms-nicar25

Weather Service



☰

jkkeefe

/ actions-workshop

Type ↵ to search

<> Code

Issues

Pull requests

Actions

Projects

Wiki

Security

Insights

Settings

actions-workshop

Public

generated from [jkkeefe/knightcenter-data-mapping](#)

main

1 branch

0 tags

Go to file

Add file

<> Code

jkkeefe wip

928b475 1 hour ago 2 commits

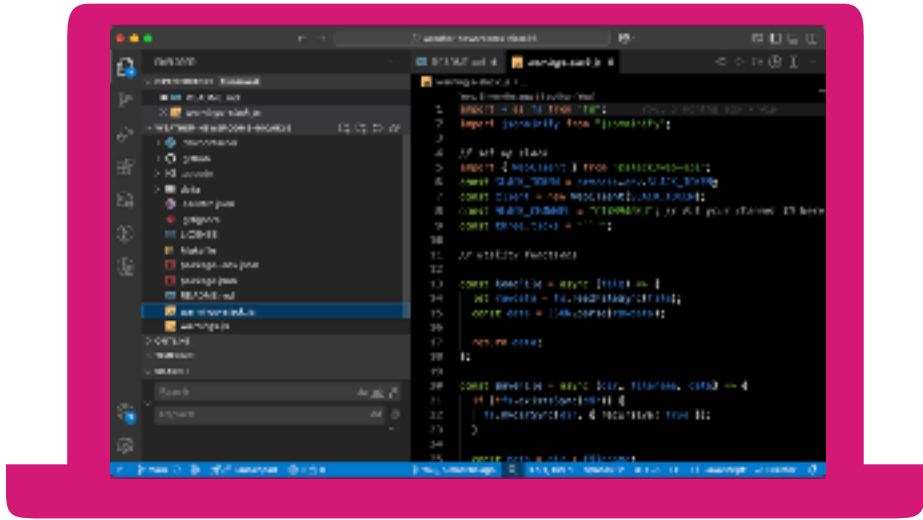
.devcontainer	Initial commit	yesterday
.github/workflows	Initial commit	yesterday
.prebaked	Initial commit	yesterday
.vscode	Initial commit	yesterday
.eslintrc.json	Initial commit	yesterday
.gitattributes	Initial commit	yesterday
.gitignore	Initial commit	yesterday
LICENSE	Initial commit	yesterday
Makefile	Initial commit	yesterday



Slack



Locally on Your laptop





Github

bit.ly/nicar25-weather

Repository

your-name/weather-newsrooms-nicar25

Weather Service



jkeefe / actions-workshop

Type to search

<> Code

Issues

Pull requests

Actions

Projects

Wiki

Security

Insights

Settings

actions-workshop

Public

generated from jkeefe/knightcenter-data-mapping

Pin

Unwatch 1

main

1 branch

0 tags

Go to file

Add file

<> Code

jkeefe wip

928b475 1 hour ago 2 commits

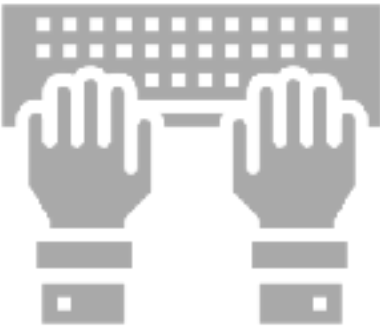
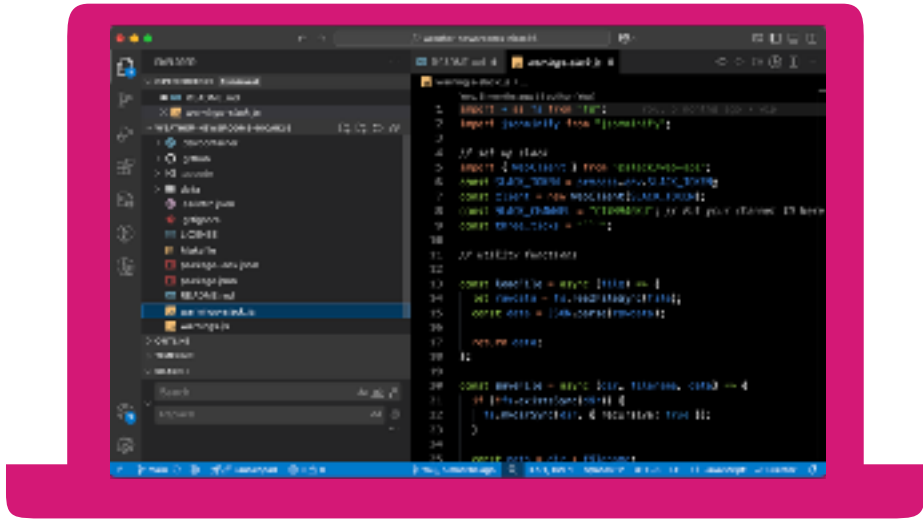
.devcontainer	Initial commit	yesterday
.github/workflows	Initial commit	yesterday
.prebaked	Initial commit	yesterday
.vscode	Initial commit	yesterday
.eslintrc.json	Initial commit	yesterday
.gitattributes	Initial commit	yesterday
.gitignore	Initial commit	yesterday
LICENSE	Initial commit	yesterday
Makefile	Initial commit	yesterday



Slack



Locally on Your laptop



You



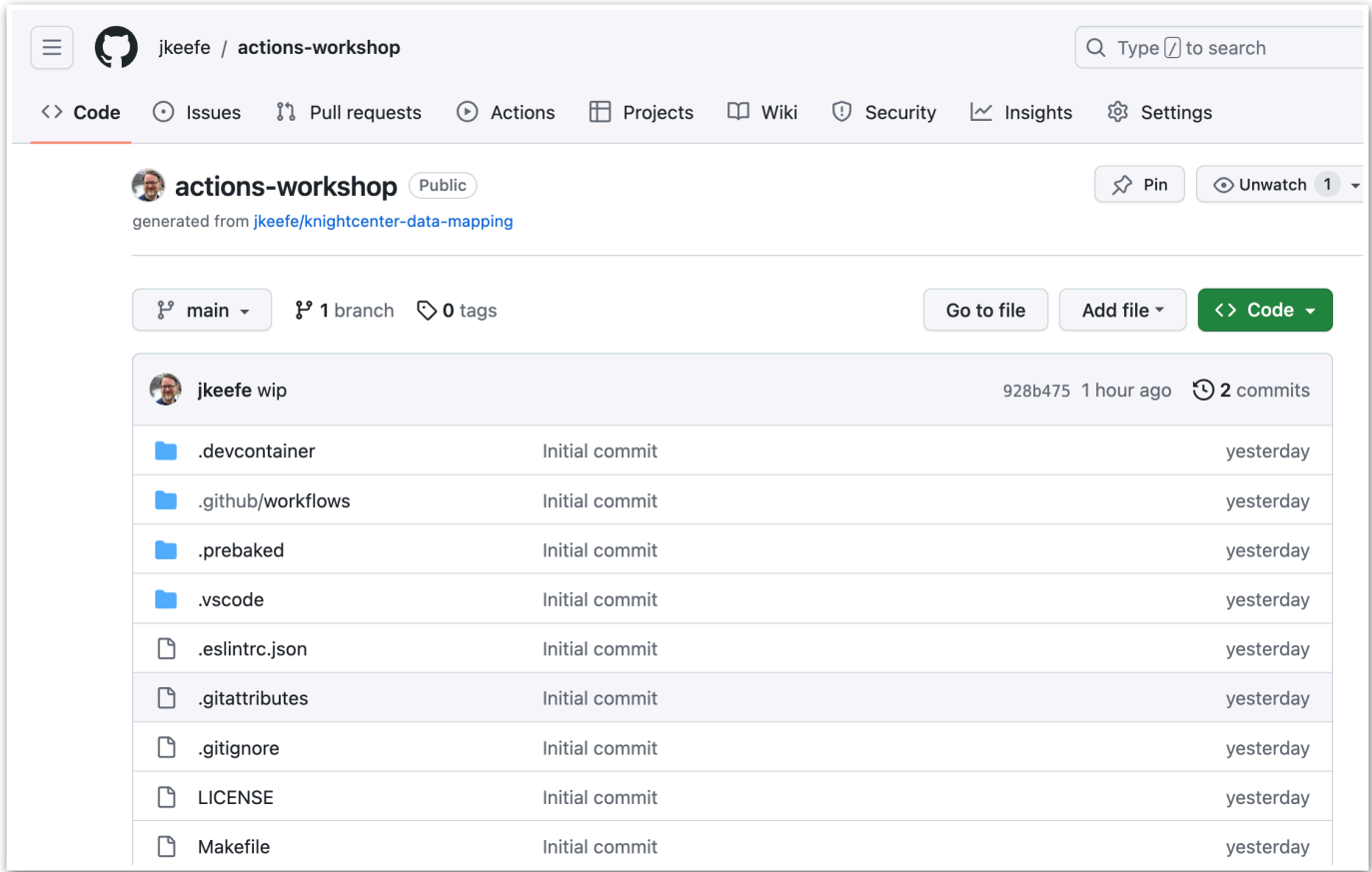
Github

bit.ly/nicar25-weather

Repository

your-name/weather-newsrooms-nicar25

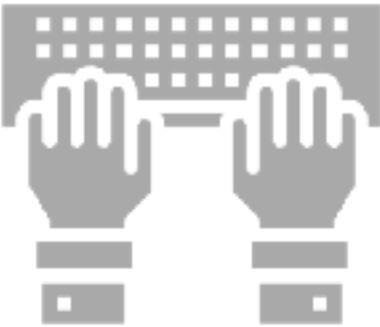
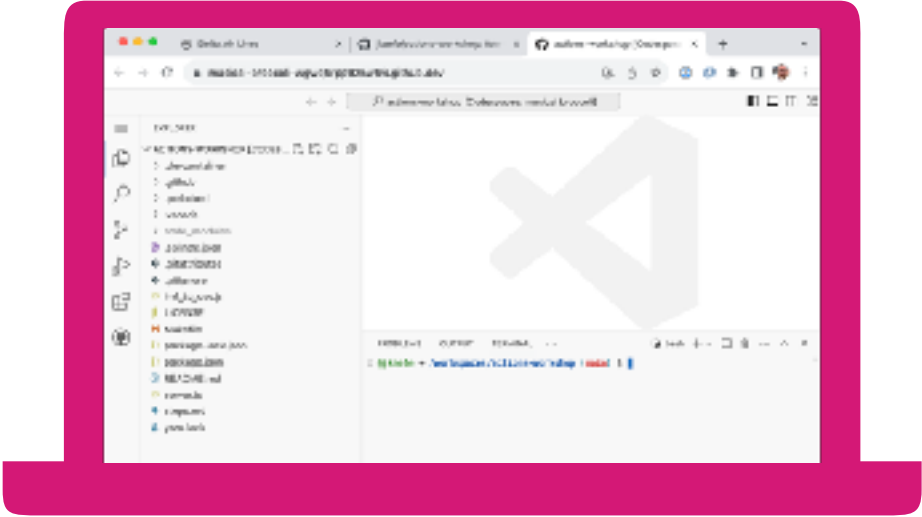
Weather Service



Slack



Github Codespaces



You

The screenshot shows the GitHub repository page for 'weather-newsrooms-nicar25' by user 'jkeefe'. The repository is public and has 1 branch (main) and 0 tags. The file list on the left includes: .devcontainer (copied over nicar25), .github/workflows (wip), data (wip), .eslintrc.json (copied over nicar25), .gitignore (copied over nicar25), LICENSE (Initial commit), Makefile (added bitly links), README.md (fixed weather.gov), package-lock.json (wip, 6 months ago), package.json (wip, 6 months ago), warnings-slack.js (wip, 6 months ago), and warnings.js (wip, 6 months ago). The repository description is 'Code and links for a workshop at NICAR 2025 in Minneapolis'. The 'About' section lists: Readme, MIT license, Activity, 0 stars, 1 watching, and 0 forks. The 'Releases' section states 'No releases published' with a link to 'Create a new release'. The 'Packages' section states 'No packages published' with a link to 'Publish your first package'. The 'Languages' section shows a bar chart with JavaScript at 94.2% and Makefile at 5.8%. The 'Suggested workflows' section is partially visible. A modal window titled 'Codespaces' is open, showing 'No codespaces' and a button to 'Create codespace on main'. Annotations with green arrows point to the 'Code' button, the 'Codespaces' tab, the repository description, and the 'Create codespace on main' button.

weather-newsrooms-nicar25

Code and links for a workshop at NICAR 2025 in Minneapolis

Create codespace on main

weather-newsrooms



Github

bit.ly/nicar25-weather

Repository

your-name/weather-newsrooms-nicar25

Weather Service



jkeefe / actions-workshop

Type ↵ to search

<> Code

Issues

Pull requests

Actions

Projects

Wiki

Security

Insights

Settings

actions-workshop

Public

generated from jkeefe/knightcenter-data-mapping

Pin

Unwatch 1

main

1 branch

0 tags

Go to file

Add file

<> Code

jkeefe wip

928b475 1 hour ago 2 commits

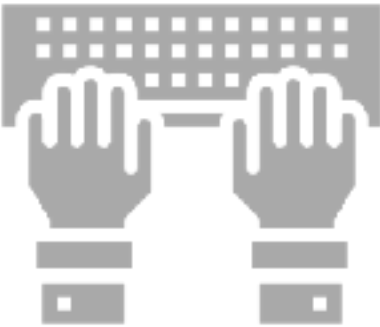
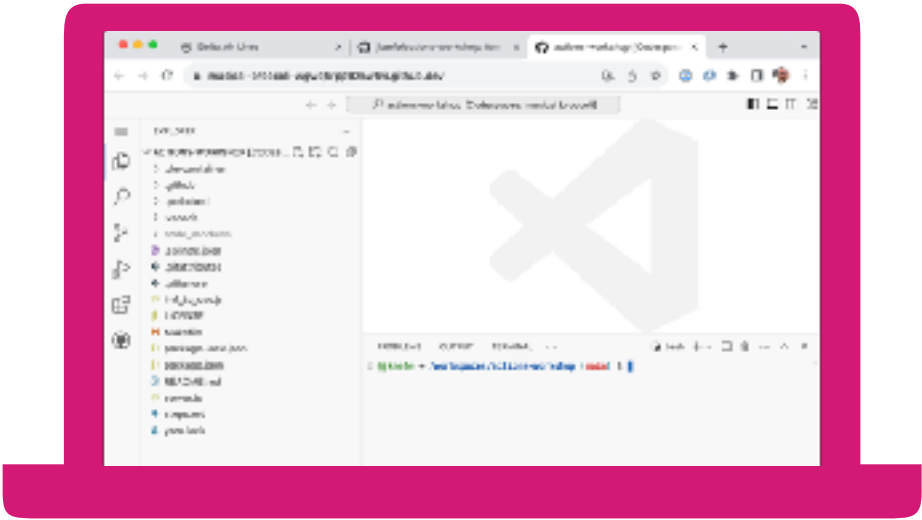
.devcontainer	Initial commit	yesterday
.github/workflows	Initial commit	yesterday
.prebaked	Initial commit	yesterday
.vscode	Initial commit	yesterday
.eslintrc.json	Initial commit	yesterday
.gitattributes	Initial commit	yesterday
.gitignore	Initial commit	yesterday
LICENSE	Initial commit	yesterday
Makefile	Initial commit	yesterday



Slack



Github Codespace



You