

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

Demo!



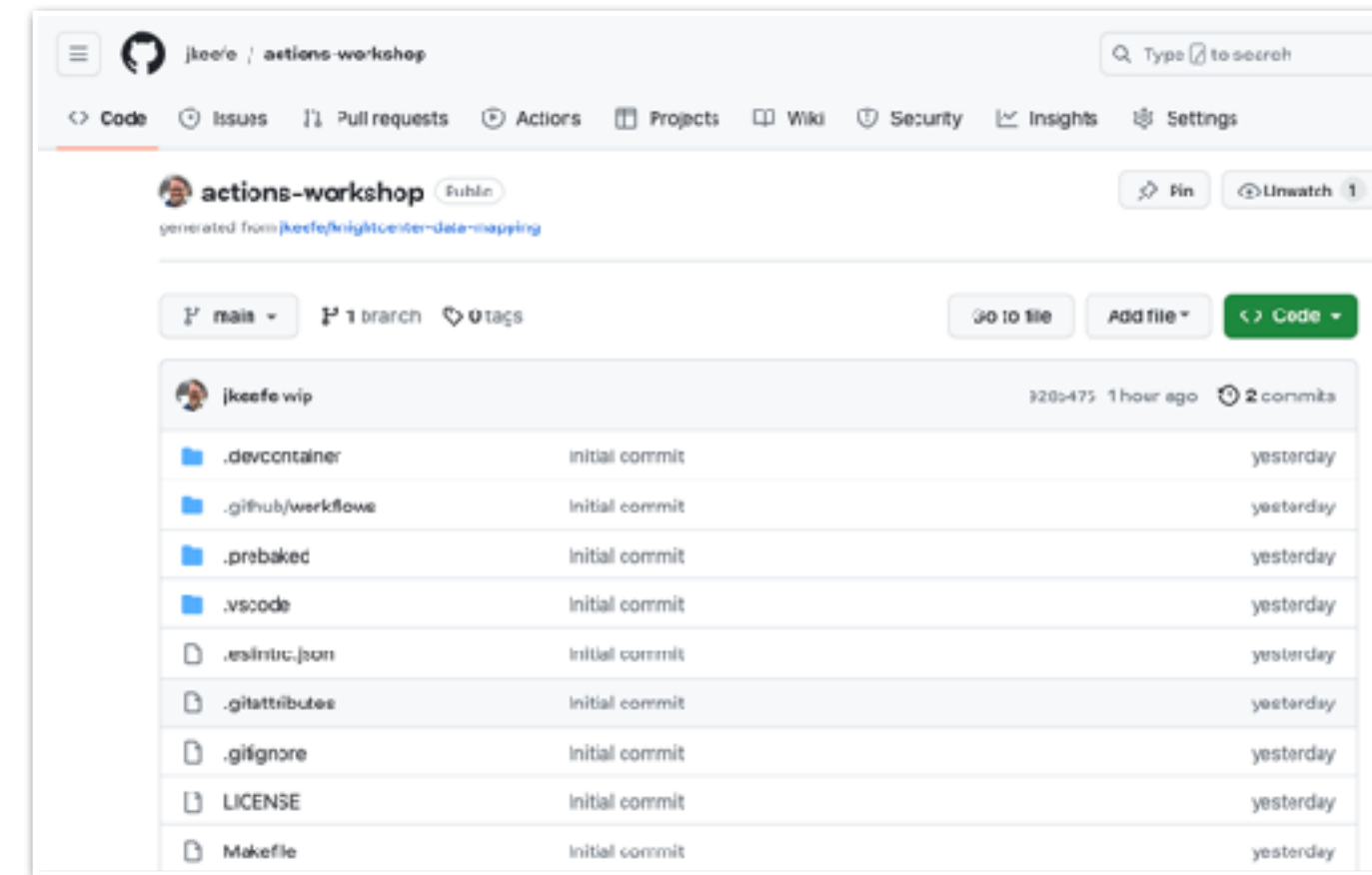
Github

bit.ly/nicar25-weather

Repository

jkeefe/weather-newsrooms-nicar25

Weather Service



Slack





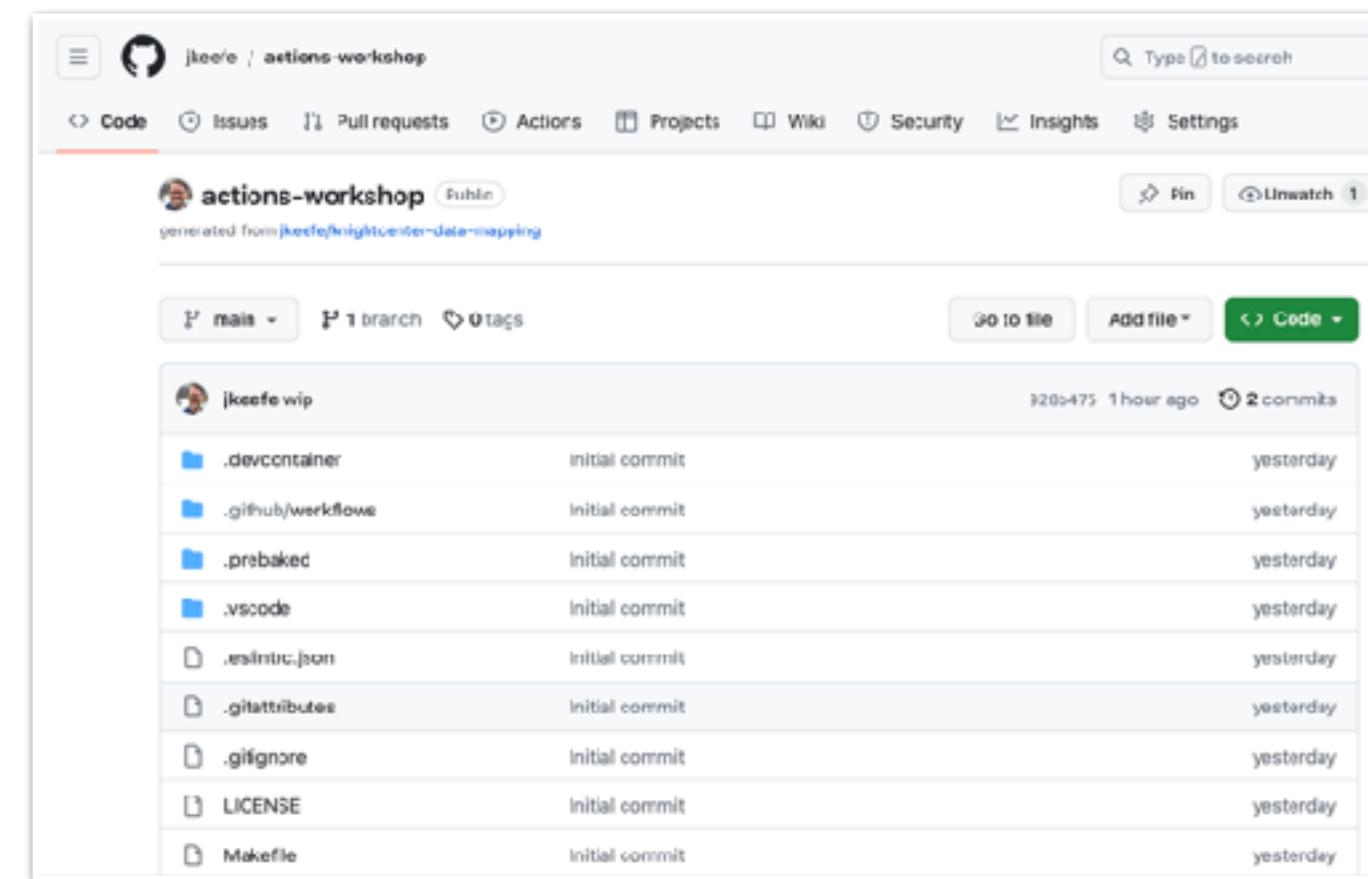
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Weather Service



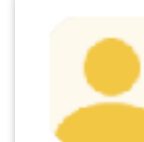
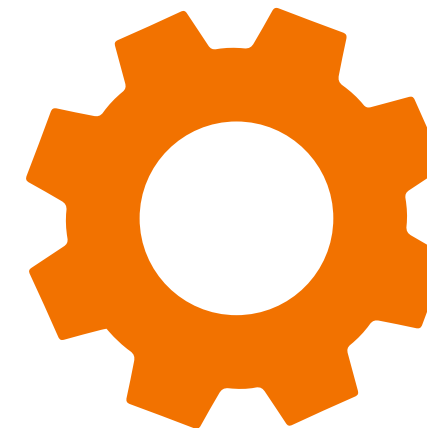
Slack



```
- 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.

* WHEN...Until 6 PM CST this evening.
```



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



Github

bit.ly/nicar25-weather

Repository

jkeefe/weather-newsrooms-nicar25

Weather Service



jkeefe

actions-workshop

Public

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

mail

1 branch

0 tags

Go to file

Add file

Code

jkeefe vip

920475 1 hour ago 2 commits

.devcontainer	initial commit	yesterday
.github/workflows	initial commit	yesterday
.prebaked	initial commit	yesterday
.vscode	initial commit	yesterday
.vsintorc.json	initial commit	yesterday
.gitattributes	initial commit	yesterday
.gitignore	initial commit	yesterday
LICENSE	initial commit	yesterday
Makefile	initial commit	yesterday



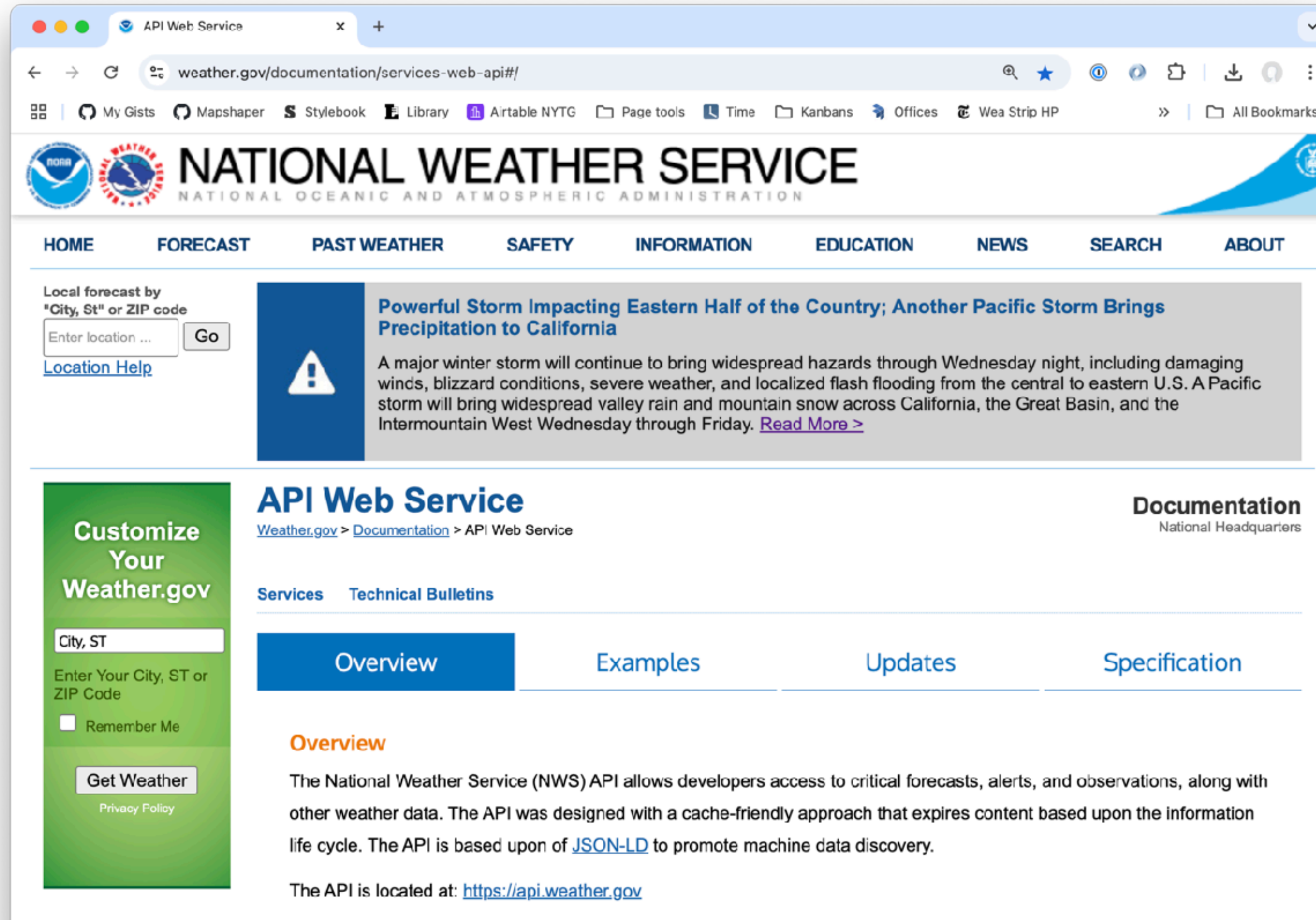
Slack



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

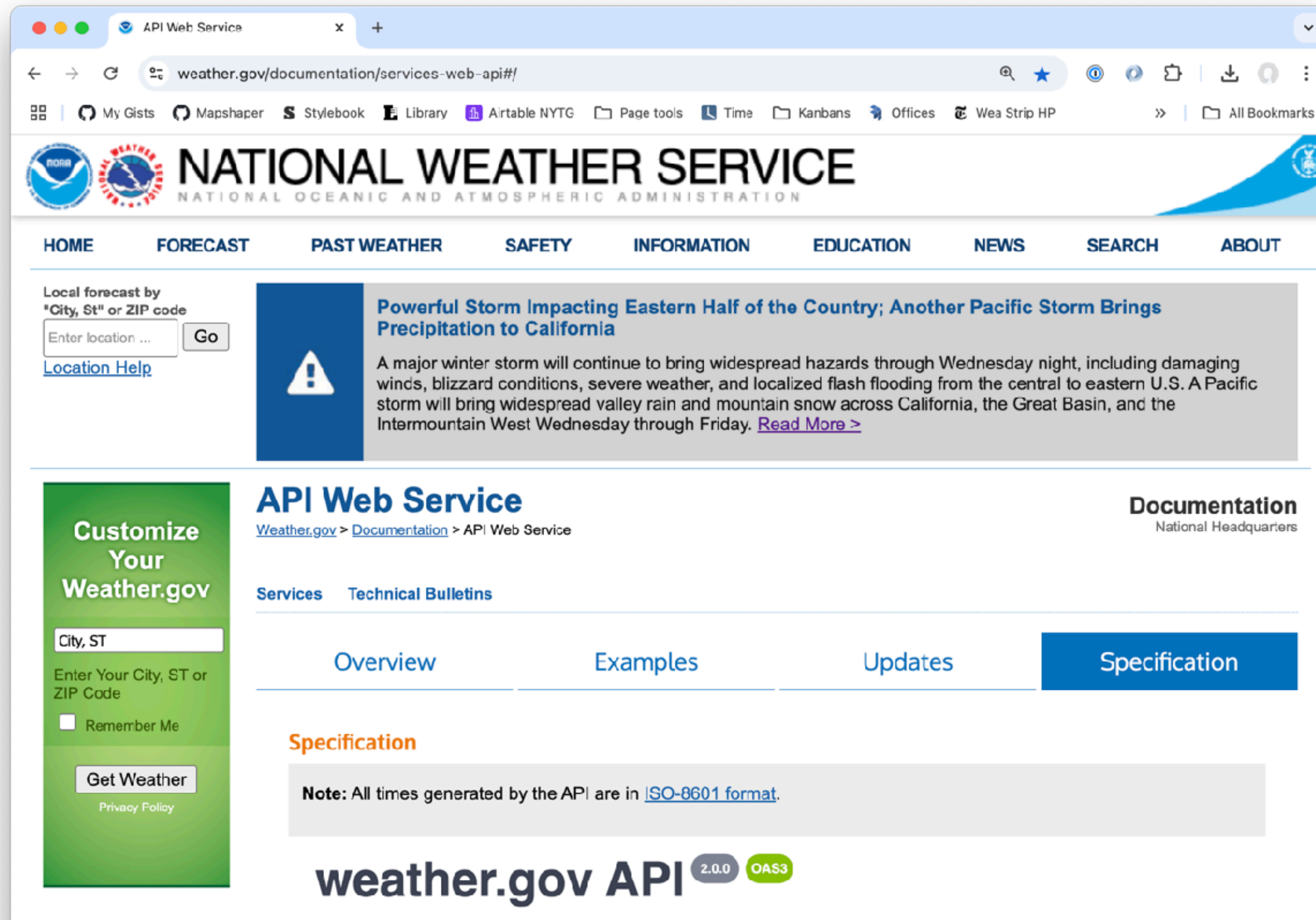
Services Technical Bulletins

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.

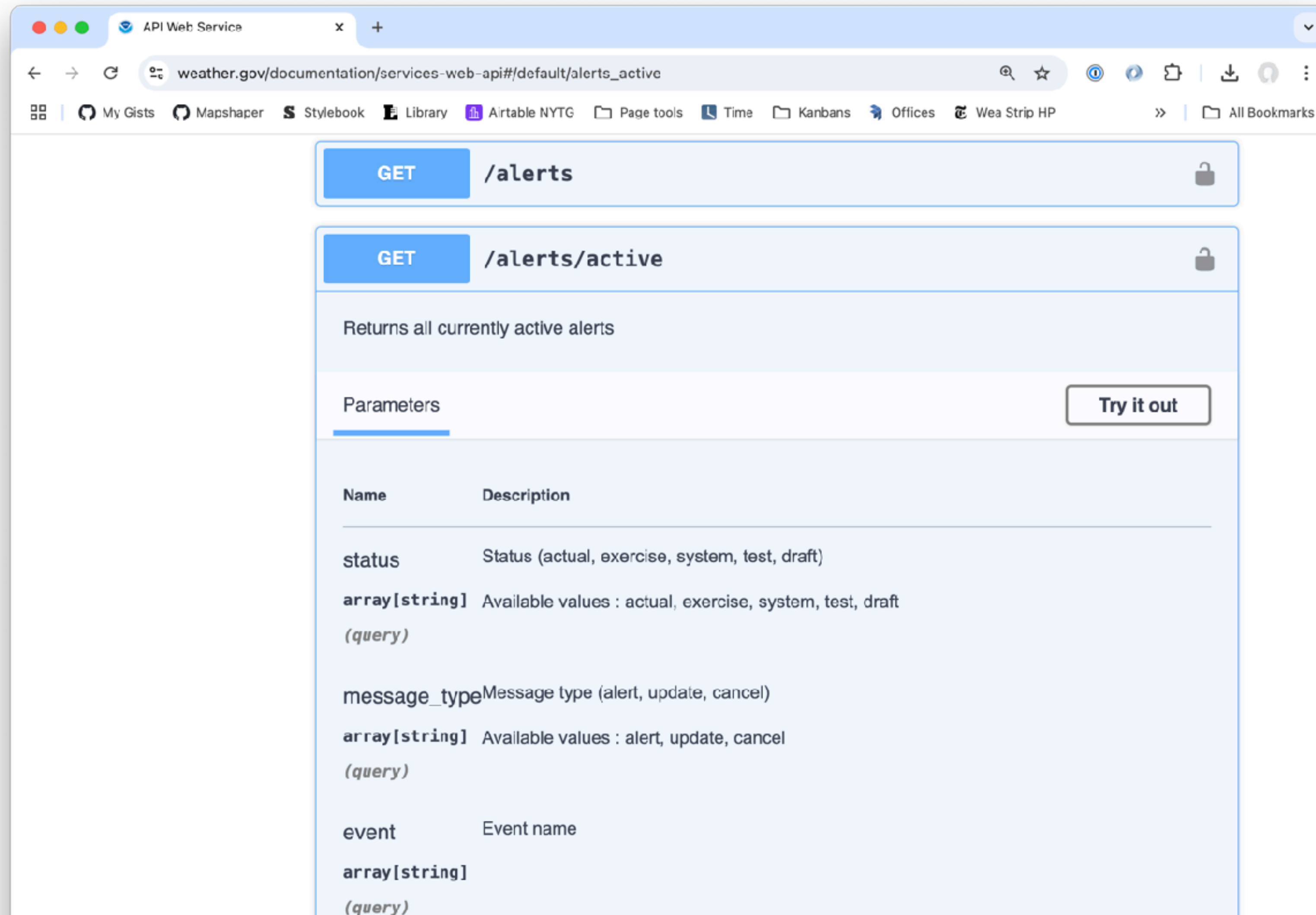
The API is located at: <https://api.weather.gov>

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 banner about a "Powerful Storm Impacting Eastern Half of the Country; Another Pacific Storm Brings Precipitation to California". Below the banner, there's a section titled "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 tabs for "Services" and "Technical Bulletins". Under "Services", there are four tabs: "Overview", "Examples", "Updates", and "Specification". The "Specification" tab is currently selected. Below the tabs, there's a "Specification" section with 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". On the left side of the page, there's a green sidebar with the text "Customize Your Weather.gov" and a form to enter a city, state, or ZIP code, with 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

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

Weather Service API

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

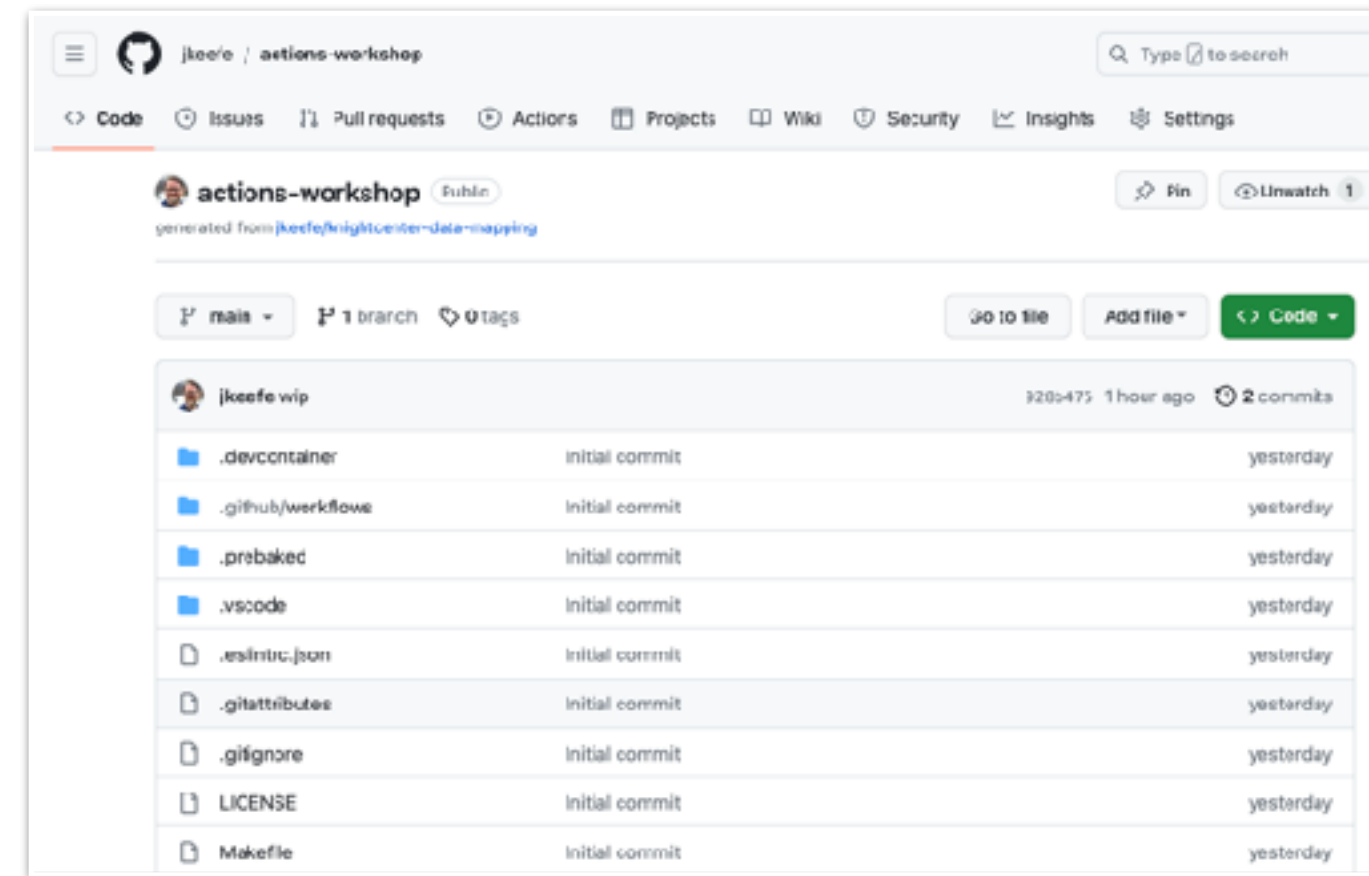
```
- features: [
  - {
    id: "https://api.weather.gov/alerts/urn:oid:2.49.0.1.840.0.d98069872072e35fb220272617b5d049d649ecd7.002.1",
    type: "Feature",
    geometry: null,
    - properties: {
      @id: "https://api.weather.gov/alerts/urn:oid:2.49.0.1.840.0.d98069872072e35fb220272617b5d049d649ecd7.002.1",
      @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





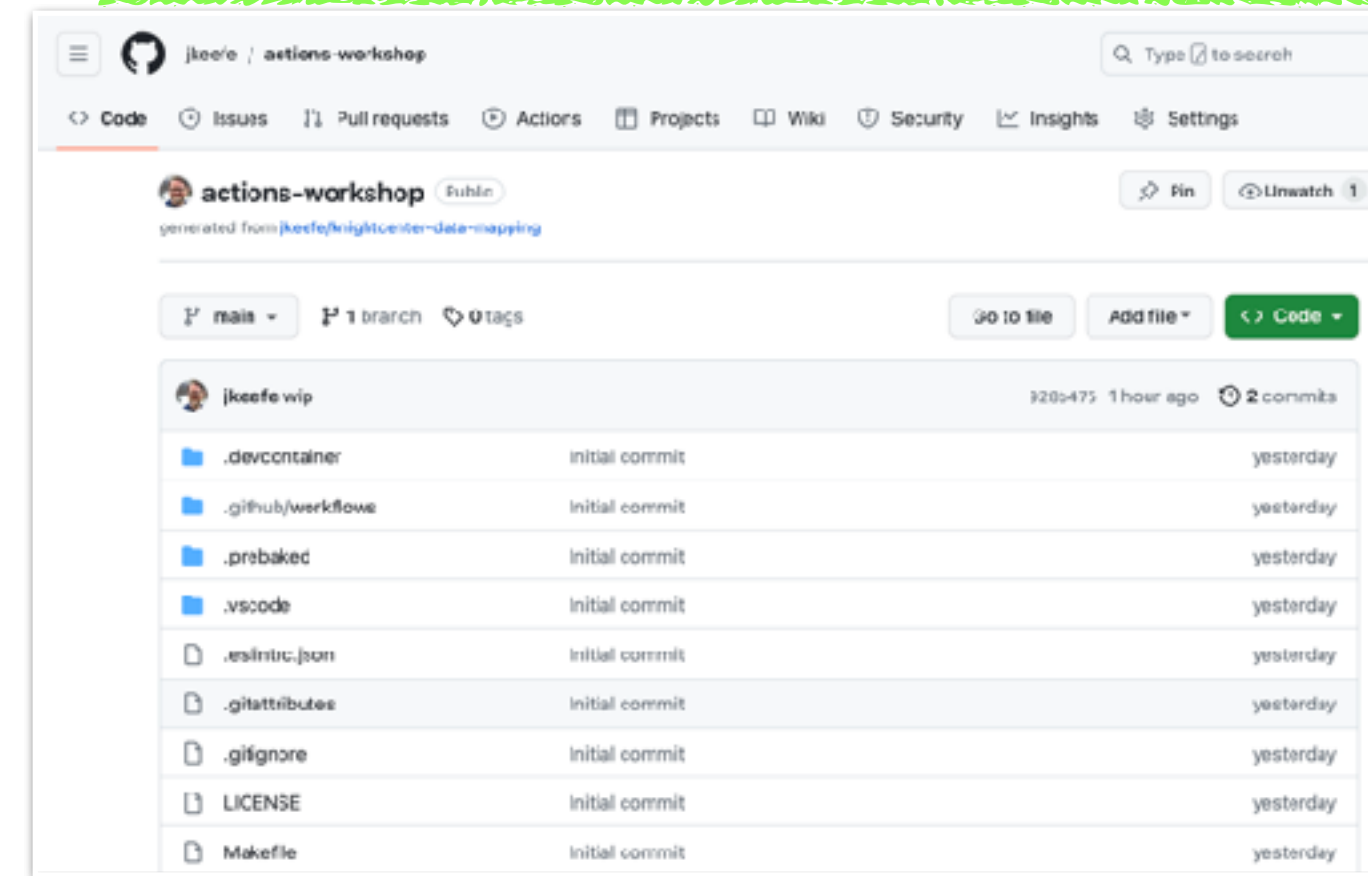
bit.ly/nicar25-weather

Weather Service



Repository

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Slack



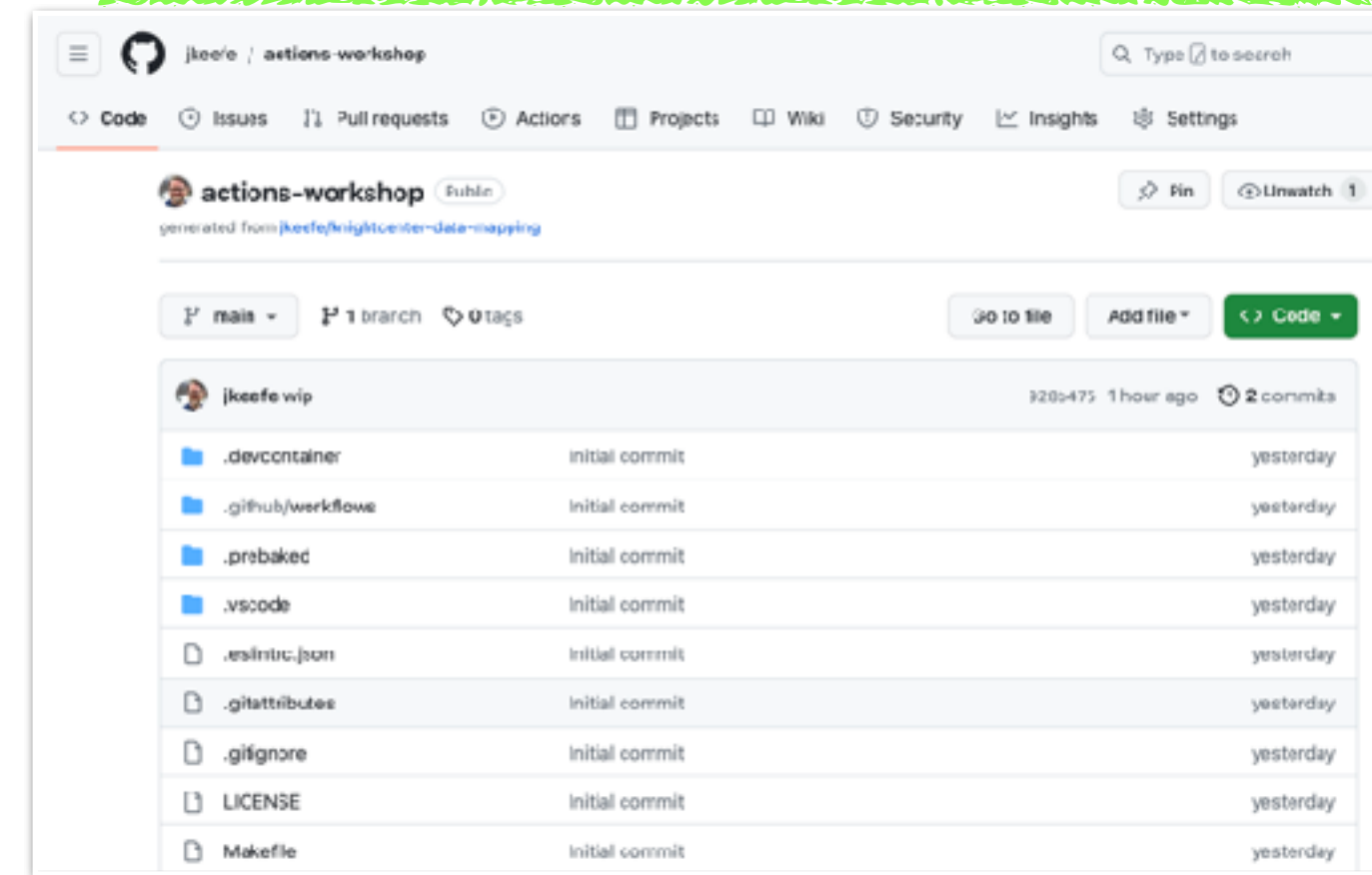


bit.ly/nicar25-weather

Repository


your-name/weather-newsrooms-nicar25

Weather Service




Slack




jkeefe / weather-newsrooms-nicar25

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📁
👤


<> 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

t
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](#)

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

About

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

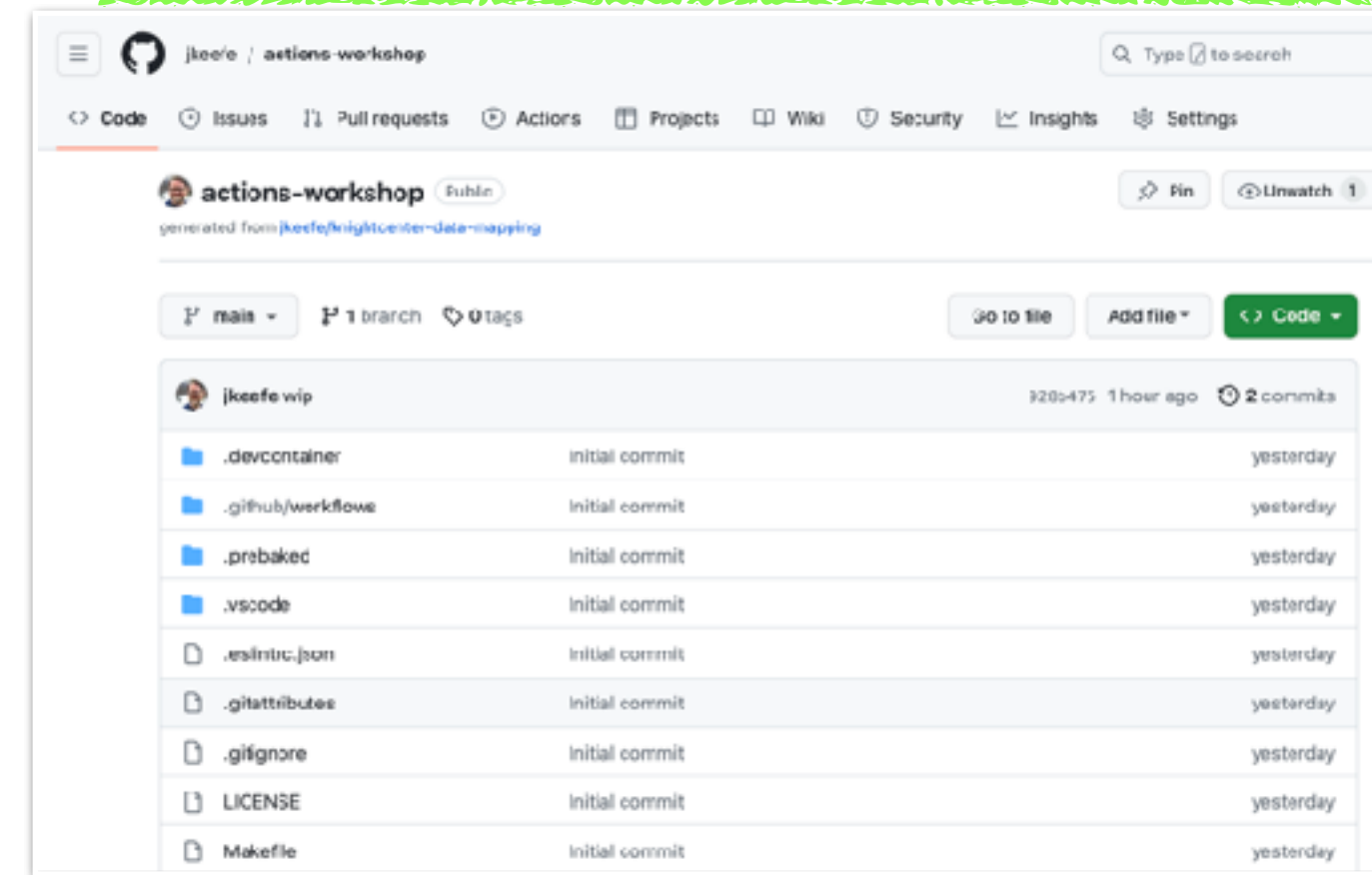


bit.ly/nicar25-weather

Repository

your-name/weather-newsrooms-nicar25

Weather Service



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Github

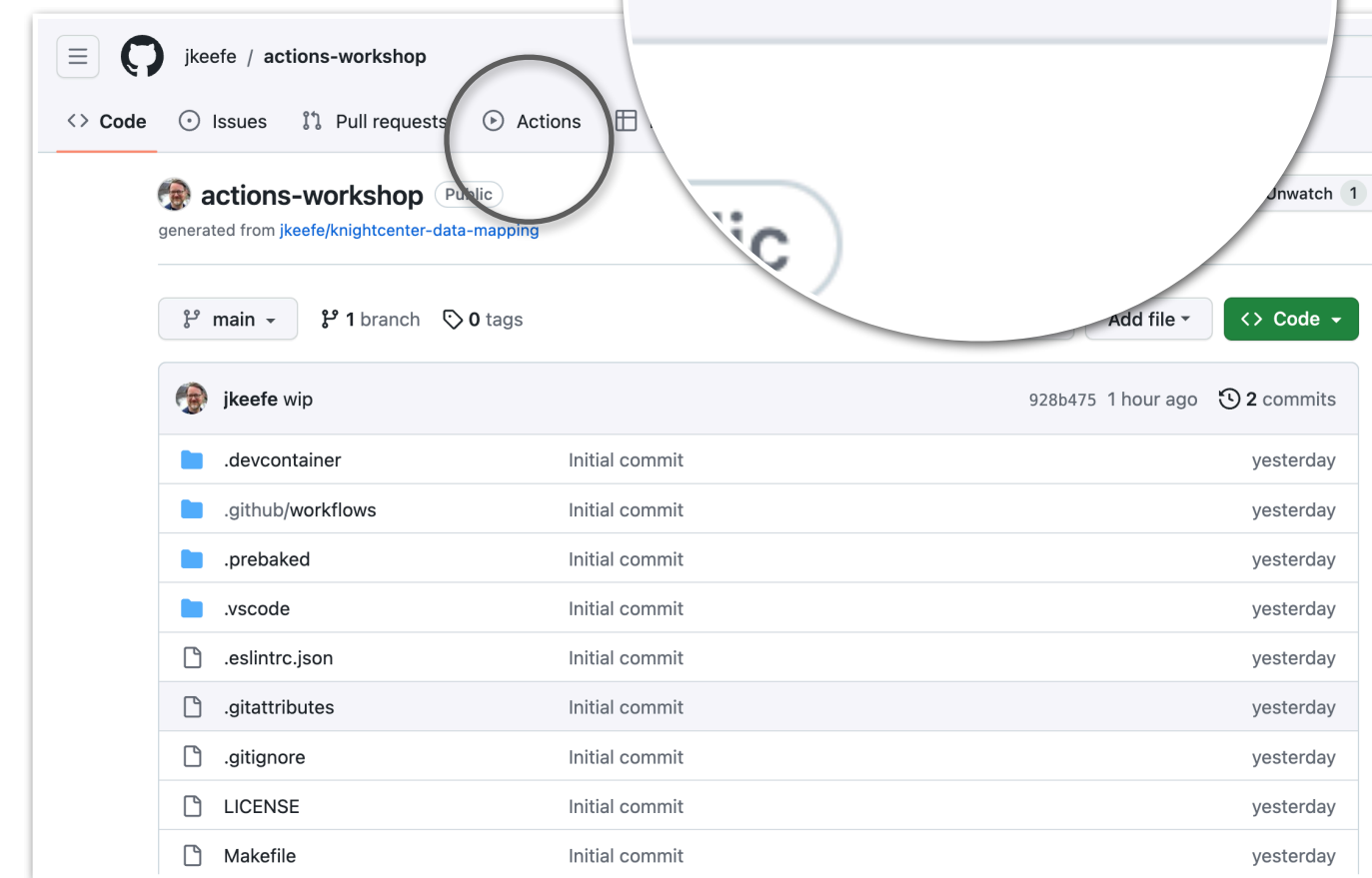
Rep

your-name/weat



Actions

10



Slack



bit.ly/nicar25-weather



Github

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Repository

your-name/weather-newsrooms-nicar25

Weather Service



jkeefe / actions-workshop

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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

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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

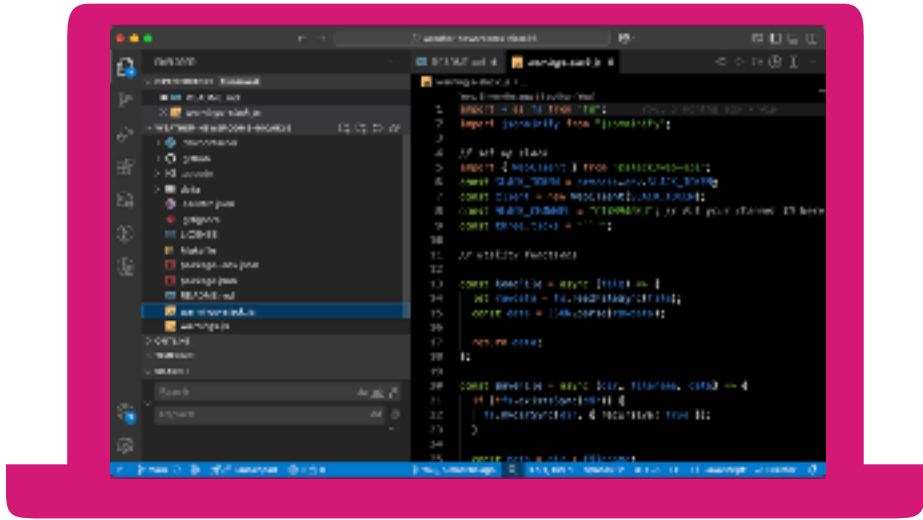
📁 .devcontainer	Initial commit	yesterday
📁 .github/workflows	Initial commit	yesterday
📁 .prebaked	Initial commit	yesterday
📁 .vscode	Initial commit	yesterday
📄 .eslintrc.json	Initial commit	yesterday
📄 .gitattributes	Initial commit	yesterday
📄 .gitignore	Initial commit	yesterday
📄 LICENSE	Initial commit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

main

1 branch

0 tags

Go to file

Add file

<> Code

jkeefe wip

928b475 1 hour ago 2 commits

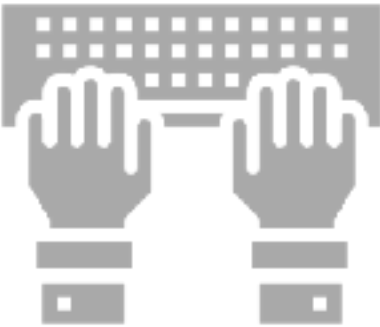
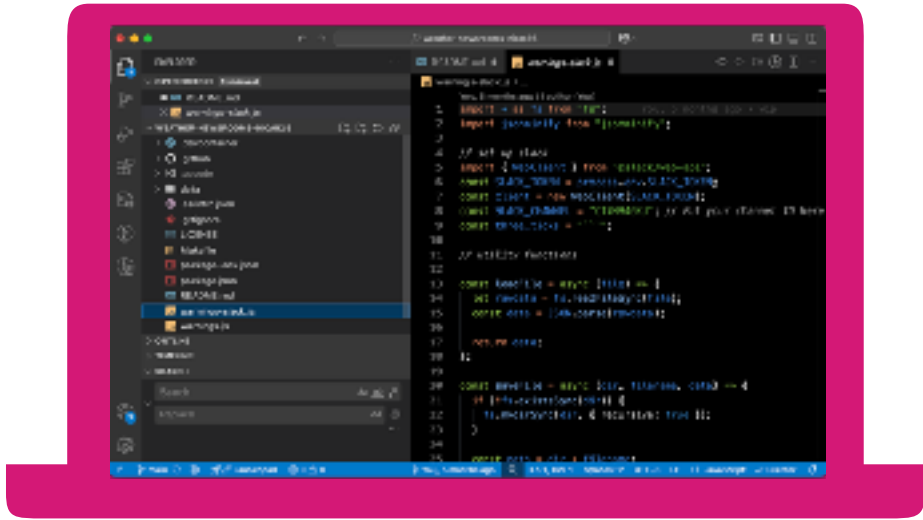
.devcontainer	Initial commit	yesterday
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.vscode	Initial commit	yesterday
.eslintrc.json	Initial commit	yesterday
.gitattributes	Initial commit	yesterday
.gitignore	Initial commit	yesterday
LICENSE	Initial commit	yesterday
Makefile	Initial commit	yesterday



Slack



Locally on Your laptop



You



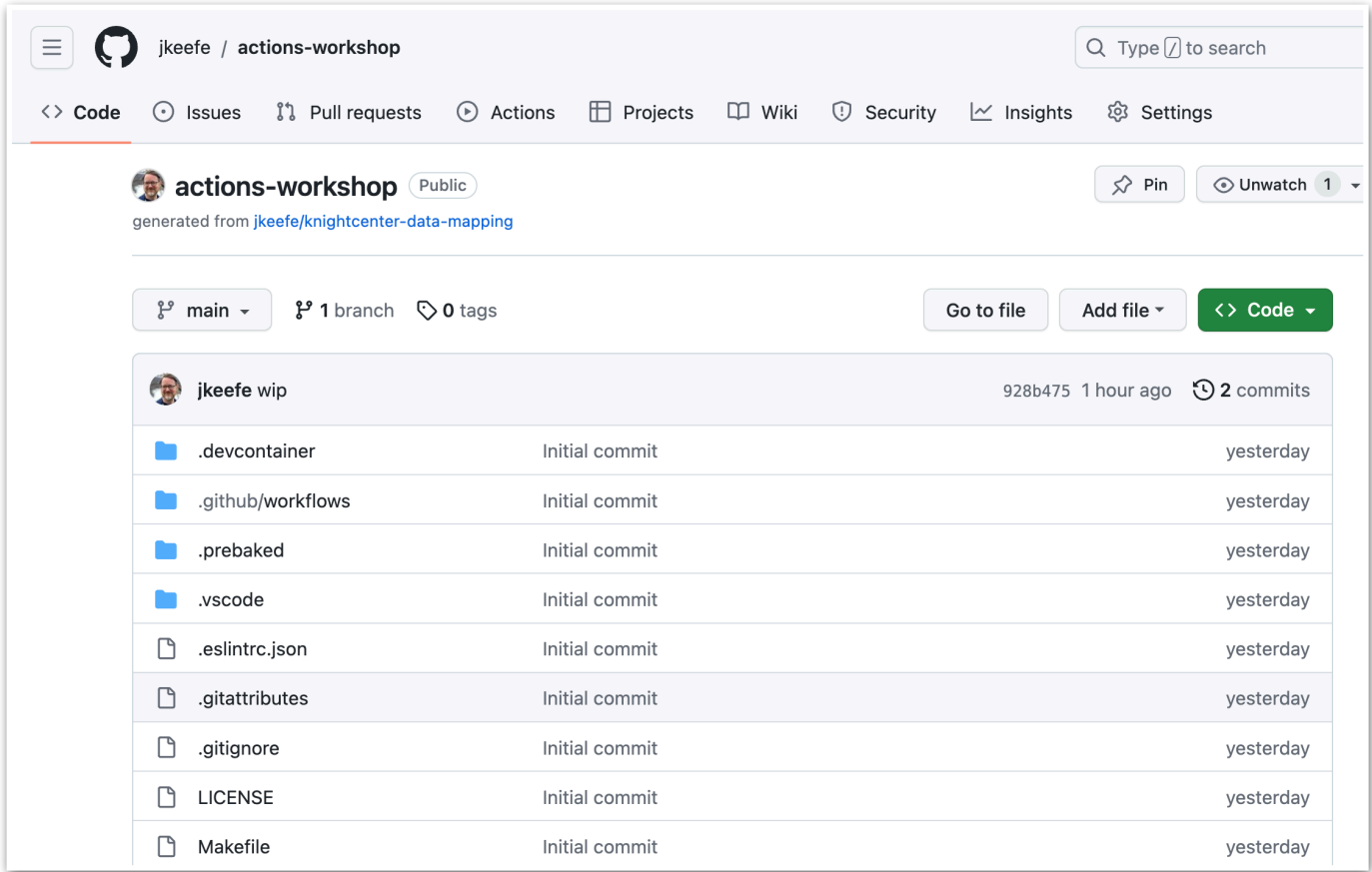
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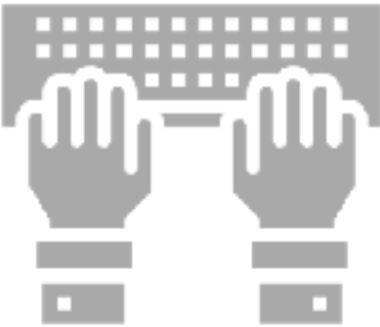
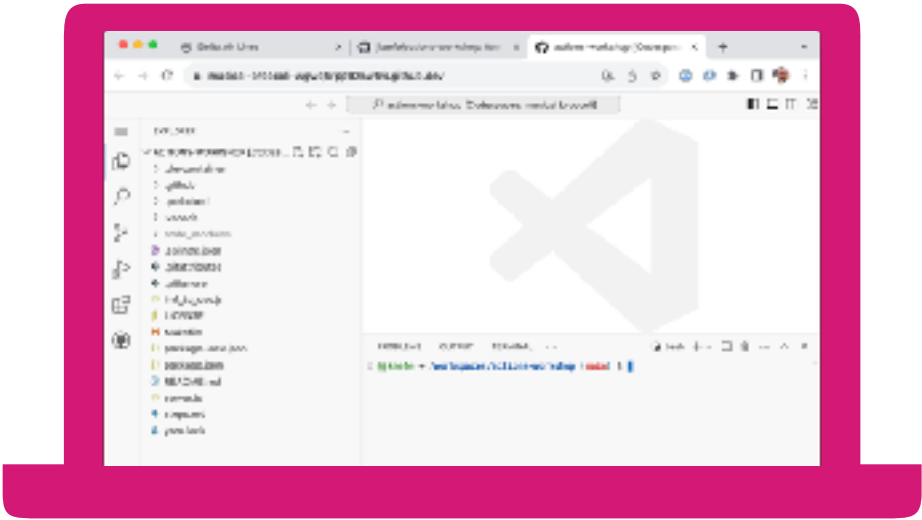
Weather Service



Slack



Github Codespaces



You

The screenshot shows a 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 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 has 0 stars, 1 watching, and 0 forks. The 'About' section contains the text: 'Code and links for a workshop at NICAR 2025 in Minneapolis'. 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 for '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 'About' section, and the 'Create codespace on main' button.

weather-newsrooms-nicar25 Public

main 1 Branch 0 Tags

Go to file Add file <> Code 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

Languages JavaScript 94.2% Makefile 5.8%

Suggested workflows Based on your tech stack

weather-newsrooms

Codespaces Your workspaces in the cloud

No codespaces You don't have any codespaces with this repository checked out

Create codespace on main

Learn more about codespaces...

Codespace usage for this repository is paid for by jkeefe.



Github

bit.ly/nicar25-weather

Repository

your-name/weather-newsrooms-nicar25

Weather Service



jkeefe / actions-workshop

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Settings

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Public

Pin

Unwatch 1

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

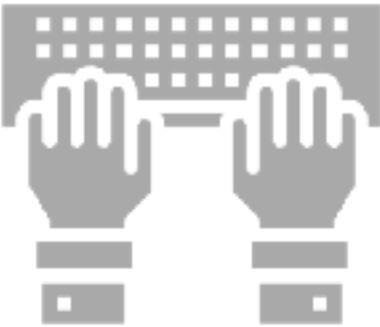
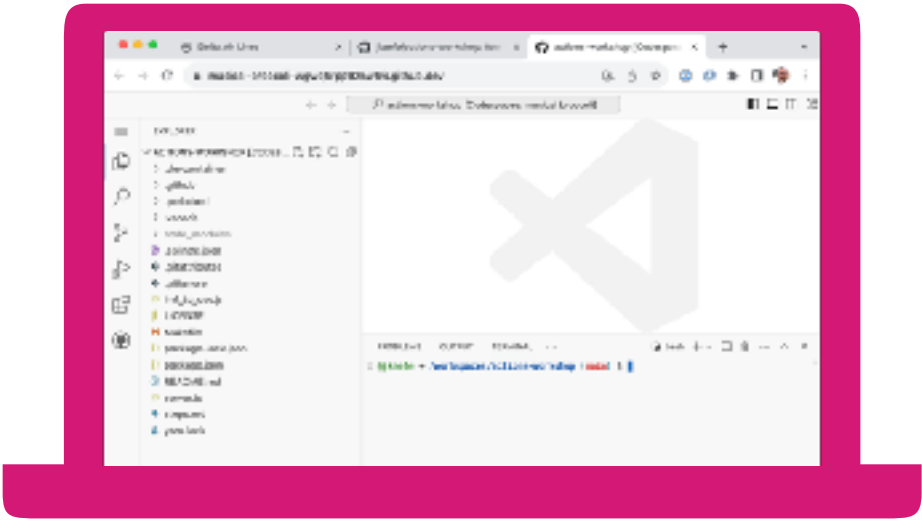
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.gitignore	Initial commit	yesterday
LICENSE	Initial commit	yesterday
Makefile	Initial commit	yesterday



Slack



Github Codespace



You