[](https://podcasts.apple.com/us/browse)
* [ Home](https://podcasts.apple.com/us/home)
* [ Browse](https://podcasts.apple.com/us/browse)
* [ Top Charts](https://podcasts.apple.com/us/charts)
* [ Search](https://podcasts.apple.com/us/search)
# PyTorch Developer Podcast
Edward Yang, Team PyTorch
* 4.8 (44)
* TECHNOLOGY
Latest Episode
![PyTorch Developer Podcast](/assets/artwork/1x1.gif)
The PyTorch Developer Podcast is a place for the PyTorch dev team to do bite
sized (10-20 min) topics about all sorts of internal development topics in
PyTorch.
Follow
## Episodes
1. [ 08/04/2024 Compiler collectives Compiler collectives are a PT2 feature where by compiler

instances across multiple ranks use NCCL collectives to communicate information to other instances. This is used to ensure we consistently decide if inputs or static or dynamic across all ranks. See also PR at https://github.com/pytorch/pytorch/pytorch/pull/130935 17 min ](https://podcasts.apple.com/us/podcast/compiler-collectives/id1566080008?i=1000664250427)

- 2. [ 04/29/2024 TORCH\_TRACE and tlparse TORCH\_TRACE and tlparse are a structured log and log parser for PyTorch 2. It gives useful information about what code was compiled and what the intermediate build products look like. 15 min [(https://podcasts.apple.com/us/podcast/torch-trace-and-tlparse/id1566080008?i=1000653855355)
- 3. [ 04/21/2024 Higher order operators Higher order operators are a special form of operators in torch.ops which have relaxed input argument requirements: in particular, they can accept any form of argument, including Python callables. Their name is based off of their most common use case, which is to represent higher order functions like control flow operators. However, they are also used to implement other variants of basic operators and can also be used to smuggle in Python data that quite unusual. They are implemented using **Python** dispatcher. 17 is а min ](https://podcasts.apple.com/us/podcast/higher-order-operators/id1566080008?i=1000653132140)
- 4. [ 04/12/2024 Inductor Post-grad FX passes The post-grad FX passes in Inductor run after AOTAutograd has functionalized and normalized the input program into separate forward/backward graphs. As such, they generally can assume that the graph in question is functionalized, except for some mutations to inputs at the end of the graph. At the end of post-grad passes, there are special passes that reintroduce mutation into the graph before going into the rest of Inductor lowering which is generally aware of passes. The post-grad FX passes are varied but are typically domain specific of passes making local changes specific parts the graph. 24 min to ](https://podcasts.apple.com/us/podcast/inductor-post-grad-fx-passes/id1566080008?i=1000652368

503)

- 5. [ 03/24/2024 CUDA graph trees CUDA graph trees are the internal implementation of CUDA graphs used in PT2 when you say mode="reduce-overhead". Their primary innovation is that they allow the reuse of memory across multiple CUDA graphs, as long as they form a tree structure of potential paths you can go down with the CUDA graph. This greatly reduced the memory usage of CUDA graphs in PT2. There are some operational implications to using CUDA graphs which are described in the podcast. 21 min [(https://podcasts.apple.com/us/podcast/cuda-graph-trees/id1566080008?i=1000650290952)
- 6. [ 03/17/2024 Min-cut partitioner The min-cut partitioner makes decisions about what to save for backwards when splitting the forward and backwards graph from the joint graph traced by AOTAutograd. Crucially, it doesn't actually do a "split"; instead, it is deciding how much of the joint graph should be used for backwards. I also talk about the backward retracing problem. 16 min [(https://podcasts.apple.com/us/podcast/min-cut-partitioner/id1566080008?i=1000649524531)
- 7. [ 03/02/2024 AOTInductor AOTInductor is a feature in PyTorch that lets you export an inference model into a self-contained dynamic library, which can subsequently be loaded and used to run optimized inference. It is aimed primarily at CUDA and CPU inference applications, for situations when your model export once to be exported once while your runtime may still get continuous updates. One of the big underlying organizing principles is a limited ABI which does not include libtorch, which allows these libraries to stay stable over updates to the runtime. There are many export-like use cases you might be interested in using AOTInductor for, and some of the pieces should **AOTInductor** useful. but does not necessarily solve them. 18 min ](https://podcasts.apple.com/us/podcast/aotinductor/id1566080008?i=1000647852991)
- 8. [ 02/24/2024 Tensor subclasses and PT2 Tensor subclasses allow you to add extend PyTorch with new types of tensors without having to write any C++. They have been used to implement

DTensor, FP8, Nested Jagged Tensor and Complex Tensor. Recent work by Brian Hirsh means that we can compile tensor subclasses in PT2, eliminating their overhead. The basic mechanism by which this compilation works is a desugaring process in AOTAutograd. There are some complications involving views, dynamic shapes and tangent metadata mismatch. 13 min ](https://podcasts.apple.com/us/podcast/tensor-subclasses-and-pt2/id1566080008?i=100064672896

[See All (83) ](https://podcasts.apple.com/us/podcast/id1566080008/episodes)

## Ratings & Reviews

4.8

out of 5

44 Ratings

\* ### Amazing

06/29/2022

poringking

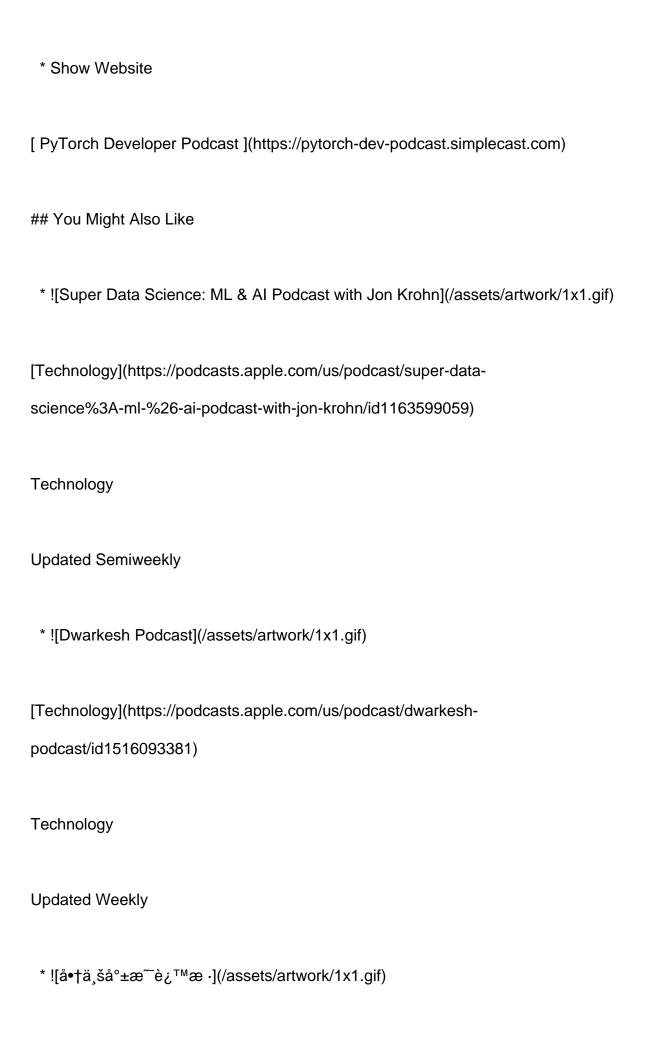
Loved every episode

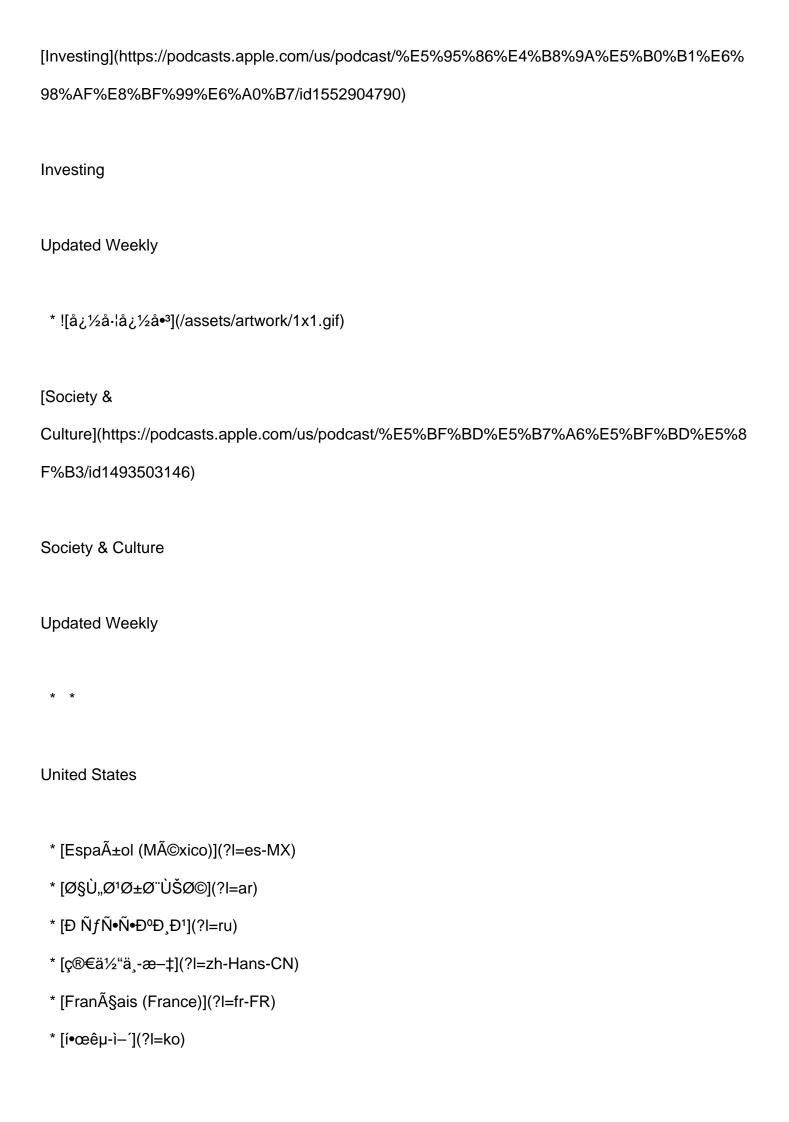
\* \*

## About

The PyTorch Developer Podcast is a place for the PyTorch dev team to do bite
sized (10-20 min) topics about all sorts of internal development topics in
PyTorch.
## Information
* Creator
Edward Yang, Team PyTorch
* Years Active
2021 - 2024
* Endander
* Episodes
83
* Rating
Clean
* Copyright

© 2021 - PyTorch Developer Podcast





- \* [PortuguÃas (Brazil)](?l=pt-BR)
- \* [Tiếng Việt](?l=vi)
- \* [繕é«"ä¸-æ–‡ (å•°ç•£)](?l=zh-Hant-TW)

Select a country or region

## Africa, Middle East, and India

- \* [Algeria](/dz/browse)
- \* [Angola](/ao/browse)
- \* [Armenia](/am/browse)
- \* [Azerbaijan](/az/browse)
- \* [Bahrain](/bh/browse)
- \* [Benin](/bj/browse)
- \* [Botswana](/bw/browse)
- \* [Brunei Darussalam](/bn/browse)
- \* [Burkina Faso](/bf/browse)
- \* [Cameroun](/cm/browse)
- \* [Cape Verde](/cv/browse)
- \* [Chad](/td/browse)
- \* [Côte d'Ivoire](/ci/browse)
- \* [Congo, The Democratic Republic Of The](/cd/browse)
- \* [Egypt](/eg/browse)
- \* [Eswatini](/sz/browse)
- \* [Gabon](/ga/browse)

- \* [Gambia](/gm/browse)
- \* [Ghana](/gh/browse)
- \* [Guinea-Bissau](/gw/browse)
- \* [India](/in/browse)
- \* [Iraq](/iq/browse)
- \* [Israel](/il/browse)
- \* [Jordan](/jo/browse)
- \* [Kenya](/ke/browse)
- \* [Kuwait](/kw/browse)
- \* [Lebanon](/lb/browse)
- \* [Liberia](/lr/browse)
- \* [Libya](/ly/browse)
- \* [Madagascar](/mg/browse)
- \* [Malawi](/mw/browse)
- \* [Mali](/ml/browse)
- \* [Mauritania](/mr/browse)
- \* [Mauritius](/mu/browse)
- \* [Morocco](/ma/browse)
- \* [Mozambique](/mz/browse)
- \* [Namibia](/na/browse)
- \* [Niger (English)](/ne/browse)
- \* [Nigeria](/ng/browse)
- \* [Oman](/om/browse)
- \* [Qatar](/qa/browse)
- \* [Congo, Republic of](/cg/browse)
- \* [Rwanda](/rw/browse)
- \* [Saudi Arabia](/sa/browse)

\* [Senegal](/sn/browse) \* [Seychelles](/sc/browse) \* [Sierra Leone](/sl/browse) \* [South Africa](/za/browse) \* [Sri Lanka](/lk/browse) \* [Tajikistan](/tj/browse) \* [Tanzania, United Republic Of](/tz/browse) \* [Tunisia](/tn/browse) \* [Turkmenistan](/tm/browse) \* [United Arab Emirates](/ae/browse) \* [Uganda](/ug/browse) \* [Yemen](/ye/browse) \* [Zambia](/zm/browse) \* [Zimbabwe](/zw/browse) ## Asia Pacific See All \* [Australia](/au/browse)

\* [Bhutan](/bt/browse)

\* [Fiji](/fj/browse)

\* [香港](/hk/browse)

\* [日本](/jp/browse)

\* [Cambodia](/kh/browse)

\* [ $\ddot{a}_{-}^{\dot{a}}$  $^{1/2}$  $\ddot{a}$  $^{x}$  $\dot{a}$  $^{x}$  $\dot{a}$  $^{y}$  $\dot{a}$  $^{y}$ 

\* [Indonesia (English)](/id/browse)

- \* [Kazakhstan](/kz/browse)
- \* [대한ë⁻¼êμ-](/kr/browse)
- \* [Kyrgyzstan](/kg/browse)
- \* [Lao People's Democratic Republic](/la/browse)
- \* [澳門](/mo/browse)
- \* [Malaysia (English)](/my/browse)
- \* [Maldives](/mv/browse)
- \* [Micronesia, Federated States of](/fm/browse)
- \* [Mongolia](/mn/browse)
- \* [Myanmar](/mm/browse)
- \* [Nepal](/np/browse)
- \* [New Zealand](/nz/browse)
- \* [Papua New Guinea](/pg/browse)
- \* [Philippines](/ph/browse)
- \* [Singapore](/sg/browse)
- \* [Solomon Islands](/sb/browse)
- \* [å•°ç•£](/tw/browse)
- \* [Thailand](/th/browse)
- \* [Tonga](/to/browse)
- \* [Turkmenistan](/tm/browse)
- \* [Uzbekistan](/uz/browse)
- \* [Vanuatu](/vu/browse)
- \* [Vietnam](/vn/browse)

## ## Europe

- \* [Armenia](/am/browse)
- \* [Ã-sterreich](/at/browse)
- \* [Belarus](/by/browse)
- \* [Belgium](/be/browse)
- \* [Bosnia and Herzegovina](/ba/browse)
- \* [Bulgaria](/bg/browse)
- \* [Croatia](/hr/browse)
- \* [Cyprus](/cy/browse)
- \* [Czechia](/cz/browse)
- \* [Denmark](/dk/browse)
- \* [Estonia](/ee/browse)
- \* [Finland](/fi/browse)
- \* [France (Français)](/fr/browse)
- \* [Georgia](/ge/browse)
- \* [Deutschland](/de/browse)
- \* [Greece](/gr/browse)
- \* [Hungary](/hu/browse)
- \* [Iceland](/is/browse)
- \* [Ireland](/ie/browse)
- \* [Italia](/it/browse)
- \* [Kosovo](/xk/browse)
- \* [Latvia](/lv/browse)
- \* [Lithuania](/lt/browse)
- \* [Luxembourg (English)](/lu/browse)
- \* [Malta](/mt/browse)
- \* [Moldova, Republic Of](/md/browse)

- \* [Montenegro](/me/browse) \* [Nederland](/nl/browse)
- \* [North Macedonia](/mk/browse)
- \* [Norway](/no/browse)
- \* [Poland](/pl/browse)
- \* [Portugal (PortuguÃas)](/pt/browse)
- \* [Romania](/ro/browse)
- \* [Đ Đ¾Ñ•Ñ•Đ¸Ñ•](/ru/browse)
- \* [Serbia](/rs/browse)
- \* [Slovakia](/sk/browse)
- \* [Slovenia](/si/browse)
- \* [España](/es/browse)
- \* [Sverige](/se/browse)
- \* [Schweiz](/ch/browse)
- \* [Türkiye (English)](/tr/browse)
- \* [Ukraine](/ua/browse)
- \* [United Kingdom](/gb/browse)

#### ## Latin America and the Caribbean

- \* [Anguilla](/ai/browse)
- \* [Antigua and Barbuda](/ag/browse)
- \* [Argentina (Español)](/ar/browse)
- \* [Bahamas](/bs/browse)
- \* [Barbados](/bb/browse)

- \* [Belize](/bz/browse)
- \* [Bermuda](/bm/browse)
- \* [Bolivia (Español)](/bo/browse)
- \* [Brasil](/br/browse)
- \* [Virgin Islands, British](/vg/browse)
- \* [Cayman Islands](/ky/browse)
- \* [Chile (Español)](/cl/browse)
- \* [Colombia (Español)](/co/browse)
- \* [Costa Rica (Español)](/cr/browse)
- \* [Dominica](/dm/browse)
- \* [República Dominicana](/do/browse)
- \* [Ecuador (Español)](/ec/browse)
- \* [El Salvador (Español)](/sv/browse)
- \* [Grenada](/gd/browse)
- \* [Guatemala (Español)](/gt/browse)
- \* [Guyana](/gy/browse)
- \* [Honduras (Español)](/hn/browse)
- \* [Jamaica](/jm/browse)
- \* [México](/mx/browse)
- \* [Montserrat](/ms/browse)
- \* [Nicaragua (Español)](/ni/browse)
- \* [Panamá](/pa/browse)
- \* [Paraguay (Español)](/py/browse)
- \* [Perú](/pe/browse)
- \* [St. Kitts and Nevis](/kn/browse)
- \* [Saint Lucia](/lc/browse)
- \* [St. Vincent and The Grenadines](/vc/browse)

- \* [Suriname](/sr/browse)
- \* [Trinidad and Tobago](/tt/browse)
- \* [Turks and Caicos](/tc/browse)
- \* [Uruguay (English)](/uy/browse)
- \* [Venezuela (Español)](/ve/browse)

## ## The United States and Canada

#### See All

- \* [Canada (English)](/ca/browse)
- \* [Canada (Français)](/ca/browse?l=fr-CA)
- \* [United States](/us/browse)
- \* [Estados Unidos (Español México)](/us/browse?l=es-MX)
- \* [اÙ,,Ù^Ù,,ايات اÙ,,٠تØ-دØ©](/us/browse?l=ar)
- \* [Đ¡Đ"Đ•](/us/browse?l=ru)
- \* [美å᠈½ (简体ä¸-æ–‡)](/us/browse?l=zh-Hans-CN)
- \* [États-Unis (Français France)](/us/browse?l=fr-FR)
- \* [미êµ-](/us/browse?l=ko)
- \* [Estados Unidos (PortuguÃas Brasil)](/us/browse?l=pt-BR)
- \* [Hoa Ká»3](/us/browse?l=vi)
- \* [美國 (繕é «"ä¸-文啰ç•£)](/us/browse?l=zh-Hant-TW)

Copyright © 2025 [Apple Inc.](https://www.apple.com) All rights reserved.

\* [Internet Service Terms](https://www.apple.com/legal/internet-services/)

[Apple

**Podcasts** 

web

player

Privacy](https://www.apple.com/legal/privacy/data/en/apple-podcasts-web)
* [Cookie Warning](https://www.apple.com/privacy/use-of-cookies/)
* [Support](https://getsupport.apple.com/?caller=webpodcasts)
* [Feedback](https://www.apple.com/feedback/apple-podcasts.html)
To listen to explicit episodes, sign in.
Sign In
![Apple Podcasts](/assets/app-icons/podcasts-icon_512.png)
Stov up to data with this show
Stay up to date with this show
Sign in or sign up to follow shows, save episodes, and get the latest updates.
Sign In
Select a country or region
## Africa, Middle East, and India
See All
* [Algeria](/dz/browse)
* [Angola](/ao/browse)
* [Armenia](/am/browse)
* [Azerbaijan](/az/browse)

\* [Bahrain](/bh/browse) \* [Benin](/bj/browse) \* [Botswana](/bw/browse) \* [Brunei Darussalam](/bn/browse) \* [Burkina Faso](/bf/browse) \* [Cameroun](/cm/browse) \* [Cape Verde](/cv/browse) \* [Chad](/td/browse) \* [Côte d'Ivoire](/ci/browse) \* [Congo, The Democratic Republic Of The](/cd/browse) \* [Egypt](/eg/browse) \* [Eswatini](/sz/browse) \* [Gabon](/ga/browse) \* [Gambia](/gm/browse) \* [Ghana](/gh/browse) \* [Guinea-Bissau](/gw/browse) \* [India](/in/browse) \* [Iraq](/iq/browse) \* [Israel](/il/browse) \* [Jordan](/jo/browse) \* [Kenya](/ke/browse) \* [Kuwait](/kw/browse) \* [Lebanon](/lb/browse) \* [Liberia](/lr/browse) \* [Libya](/ly/browse) \* [Madagascar](/mg/browse)

\* [Malawi](/mw/browse)

- \* [Mali](/ml/browse)
- \* [Mauritania](/mr/browse)
- \* [Mauritius](/mu/browse)
- \* [Morocco](/ma/browse)
- \* [Mozambique](/mz/browse)
- \* [Namibia](/na/browse)
- \* [Niger (English)](/ne/browse)
- \* [Nigeria](/ng/browse)
- \* [Oman](/om/browse)
- \* [Qatar](/qa/browse)
- \* [Congo, Republic of](/cg/browse)
- \* [Rwanda](/rw/browse)
- \* [Saudi Arabia](/sa/browse)
- \* [Senegal](/sn/browse)
- \* [Seychelles](/sc/browse)
- \* [Sierra Leone](/sl/browse)
- \* [South Africa](/za/browse)
- \* [Sri Lanka](/lk/browse)
- \* [Tajikistan](/tj/browse)
- \* [Tanzania, United Republic Of](/tz/browse)
- \* [Tunisia](/tn/browse)
- \* [Turkmenistan](/tm/browse)
- \* [United Arab Emirates](/ae/browse)
- \* [Uganda](/ug/browse)
- \* [Yemen](/ye/browse)
- \* [Zambia](/zm/browse)
- \* [Zimbabwe](/zw/browse)

#### ## Asia Pacific

- \* [Australia](/au/browse)
- \* [Bhutan](/bt/browse)
- \* [Cambodia](/kh/browse)
- \* [ä¸-å⟩½å¤§é™†](/cn/browse)
- \* [Fiji](/fj/browse)
- \* [香港](/hk/browse)
- \* [Indonesia (English)](/id/browse)
- \* [日本](/jp/browse)
- \* [Kazakhstan](/kz/browse)
- \* [대한ë⁻¼êμ-](/kr/browse)
- \* [Kyrgyzstan](/kg/browse)
- \* [Lao People's Democratic Republic](/la/browse)
- \* [澳門](/mo/browse)
- \* [Malaysia (English)](/my/browse)
- \* [Maldives](/mv/browse)
- \* [Micronesia, Federated States of](/fm/browse)
- \* [Mongolia](/mn/browse)
- \* [Myanmar](/mm/browse)
- \* [Nepal](/np/browse)
- \* [New Zealand](/nz/browse)
- \* [Papua New Guinea](/pg/browse)
- \* [Philippines](/ph/browse)

\* [Singapore](/sg/browse) \* [Solomon Islands](/sb/browse) \* [å•°ç•£](/tw/browse) \* [Thailand](/th/browse) \* [Tonga](/to/browse) \* [Turkmenistan](/tm/browse) \* [Uzbekistan](/uz/browse) \* [Vanuatu](/vu/browse) \* [Vietnam](/vn/browse) ## Europe See All \* [Armenia](/am/browse) \* [Ã-sterreich](/at/browse) \* [Belarus](/by/browse) \* [Belgium](/be/browse) \* [Bosnia and Herzegovina](/ba/browse) \* [Bulgaria](/bg/browse) \* [Croatia](/hr/browse) \* [Cyprus](/cy/browse) \* [Czechia](/cz/browse) \* [Denmark](/dk/browse) \* [Estonia](/ee/browse) \* [Finland](/fi/browse) \* [France (Français)](/fr/browse)

- \* [Georgia](/ge/browse)
- \* [Deutschland](/de/browse)
- \* [Greece](/gr/browse)
- \* [Hungary](/hu/browse)
- \* [Iceland](/is/browse)
- \* [Ireland](/ie/browse)
- \* [Italia](/it/browse)
- \* [Kosovo](/xk/browse)
- \* [Latvia](/lv/browse)
- \* [Lithuania](/lt/browse)
- \* [Luxembourg (English)](/lu/browse)
- \* [Malta](/mt/browse)
- \* [Moldova, Republic Of](/md/browse)
- \* [Montenegro](/me/browse)
- \* [Nederland](/nl/browse)
- \* [North Macedonia](/mk/browse)
- \* [Norway](/no/browse)
- \* [Poland](/pl/browse)
- \* [Portugal (PortuguÃas)](/pt/browse)
- \* [Romania](/ro/browse)
- \* [Serbia](/rs/browse)
- \* [Slovakia](/sk/browse)
- \* [Slovenia](/si/browse)
- \* [España](/es/browse)
- \* [Sverige](/se/browse)
- \* [Schweiz](/ch/browse)

- \* [Türkiye (English)](/tr/browse)
- \* [Ukraine](/ua/browse)
- \* [United Kingdom](/gb/browse)

## ## Latin America and the Caribbean

- \* [Anguilla](/ai/browse)
- \* [Antigua and Barbuda](/ag/browse)
- \* [Argentina (Español)](/ar/browse)
- \* [Bahamas](/bs/browse)
- \* [Barbados](/bb/browse)
- \* [Belize](/bz/browse)
- \* [Bermuda](/bm/browse)
- \* [Bolivia (Español)](/bo/browse)
- \* [Brasil](/br/browse)
- \* [Virgin Islands, British](/vg/browse)
- \* [Cayman Islands](/ky/browse)
- \* [Chile (Español)](/cl/browse)
- \* [Colombia (Español)](/co/browse)
- \* [Costa Rica (Español)](/cr/browse)
- \* [Dominica](/dm/browse)
- \* [República Dominicana](/do/browse)
- \* [Ecuador (Español)](/ec/browse)
- \* [El Salvador (Español)](/sv/browse)
- \* [Grenada](/gd/browse)

- \* [Guatemala (Español)](/gt/browse)
- \* [Guyana](/gy/browse)
- \* [Honduras (Español)](/hn/browse)
- \* [Jamaica](/jm/browse)
- \* [México](/mx/browse)
- \* [Montserrat](/ms/browse)
- \* [Nicaragua (Español)](/ni/browse)
- \* [PanamÃi](/pa/browse)
- \* [Paraguay (Español)](/py/browse)
- \* [Perú](/pe/browse)
- \* [St. Kitts and Nevis](/kn/browse)
- \* [Saint Lucia](/lc/browse)
- \* [St. Vincent and The Grenadines](/vc/browse)
- \* [Suriname](/sr/browse)
- \* [Trinidad and Tobago](/tt/browse)
- \* [Turks and Caicos](/tc/browse)
- \* [Uruguay (English)](/uy/browse)
- \* [Venezuela (Español)](/ve/browse)

## The United States and Canada

- \* [Canada (English)](/ca/browse)
- \* [Canada (Français)](/ca/browse?l=fr-CA)
- \* [United States](/us/browse)
- \* [Estados Unidos (Español México)](/us/browse?l=es-MX)

- \* [اÙ,,Ù^Ù,,ايات اÙ,,٠تØ-دØ©](/us/browse?l=ar)
- \* [Đ¡Đ"Đ•](/us/browse?l=ru)
- \* [美å᠈½ (简体ä¸-æ–‡)](/us/browse?l=zh-Hans-CN)
- \* [États-Unis (Français France)](/us/browse?l=fr-FR)
- \* [ë¯,êµ-](/us/browse?l=ko)
- \* [Estados Unidos (PortuguÃas Brasil)](/us/browse?l=pt-BR)
- \* [Hoa Kỳ](/us/browse?l=vi)
- \* [美國 (繕é«"ä¸-文啰ç•£)](/us/browse?l=zh-Hant-TW)