

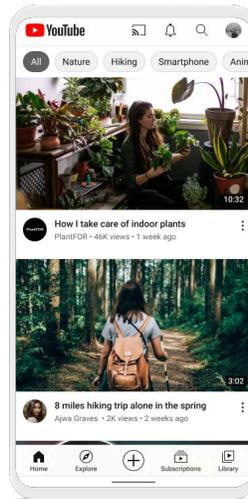
# How YouTube recommends videos

Recommendations help viewers discover content they love. We take into account many signals, including watch and search history to recommend videos relevant to viewers. At the same time, we provide controls to help viewers manage the recommendations they see. We also have systems in place to reduce recommendations of harmful misinformation and borderline content.

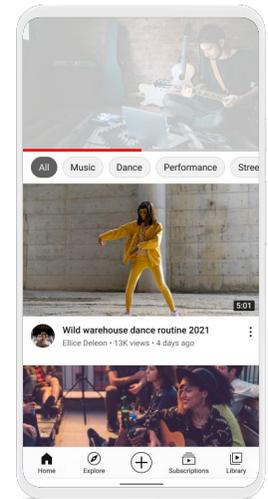


## Where can video recommendations be found on YouTube?

Recommended videos and topics are found on YouTube’s homepage and in the “Up next” section as a suggestion of what to watch next when watching a video.



Recommendations on homepage



“Up next” recommendations on watch page

## How are videos recommended to viewers?

We take into account many signals to recommend videos that are relevant to each viewer.

### Context signals

Location

Language

Time of day

### Personal activity signals

Channel subscriptions

Search history across YouTube and Google

Watch history across YouTube and Google

### Video performance signals

**Appeal**  
Do viewers choose to watch a recommended video? (click through rate, in-product user feedback)

**Engagement**  
How long are viewers watching a recommended video? (average view duration)

**Satisfaction**  
Do viewers enjoy a specific video? (likes/dislikes, in-product user surveys)

### Responsibility signals

**We reduce recommendations** of borderline content (content that comes close to—but doesn’t quite cross the line of—violating our Community Guidelines) or videos that could misinform users in harmful ways

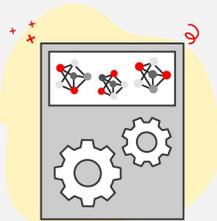
# How does YouTube protect viewers from harmful recommendations?

In 2019, we announced changes to our recommendation systems to reduce the spread of borderline content, resulting in a 70% drop in watchtime on non-subscribed, recommended content in the U.S. that year. We saw a drop in watchtime of borderline content coming from recommendations in other countries as well. As of March 2021, we have now rolled out changes to our recommendation system to reduce borderline content in every market where we operate.

## How do you find and limit borderline content?



**External evaluators** make multiple assessments on the quality of a video



**Machine learning systems** build models based on consensus from evaluators



**Systems review** videos at scale to find and limit the spread of borderline content

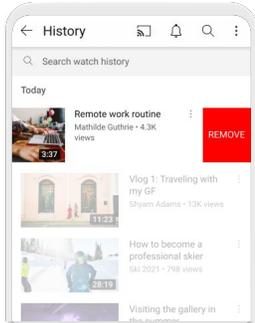
# .5%

While algorithmic changes take time to ramp up and you might see consumption of borderline content go up and down, our goal is to have views of non-subscribed, recommended borderline content below 0.5%.

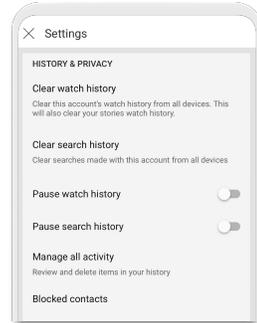
# How can viewers control what is recommended to them?

YouTube offers viewers a range of tools which enable them to both fine tune their experience on the platform and decide what personal information is used to influence recommendations.

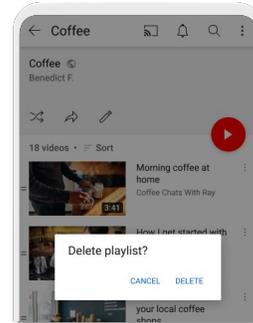
## Manage personal activity signals



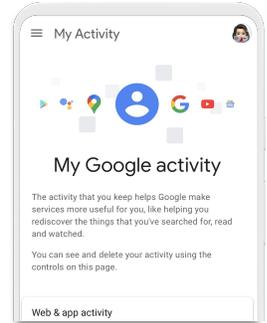
**Remove specific videos** from watch and search history



**Clear or pause watch and search history**

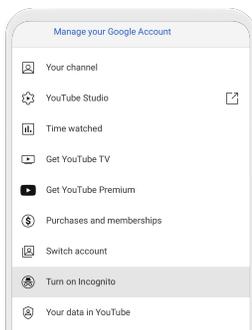


**Remove liked videos and edit or delete playlists**



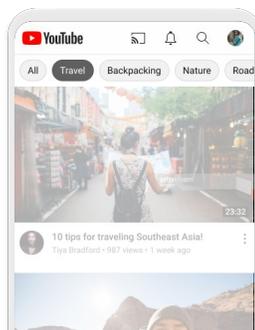
**View and control browsing history** across Google at [myactivity.google.com](https://myactivity.google.com)

## Browse privately

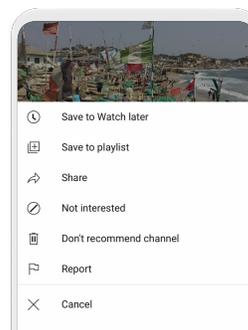


**Browse in Incognito mode** so search and watch history don't impact recommendations

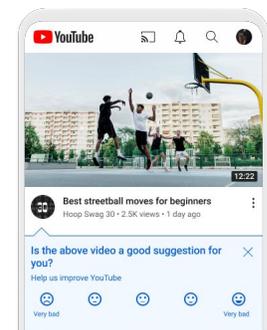
## Fine tune recommendations



**Choose topics** in recommendations



**Remove recommended content** that isn't of interest



**Give direct feedback** via surveys