

# Use AI to Prevent Interference to Student Learning

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Deledao Confidential

[www.deledao.com/education](http://www.deledao.com/education)

# Firewalls = Not good enough

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- Primitive technology for filtering --> blocking by domains or keywords
  - Long blacklists
  - Over-blocking vs wide open policy
- Need separate content filter solution for today's needs
  - Involves more than filtering
    - Parent engagement
    - Student safety/student wellness

# Long blacklists - Games

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- By domain or URL
  - [www.addictinggames.com](http://www.addictinggames.com)
    - The obvious answer

# Long blacklists - Games

- Will you block AARP? <https://games.aarp.org/>



## Games

All | Mahjongg | Solitaire | Word | Arcade | Members Only ▾ | More ▾ | ? Help

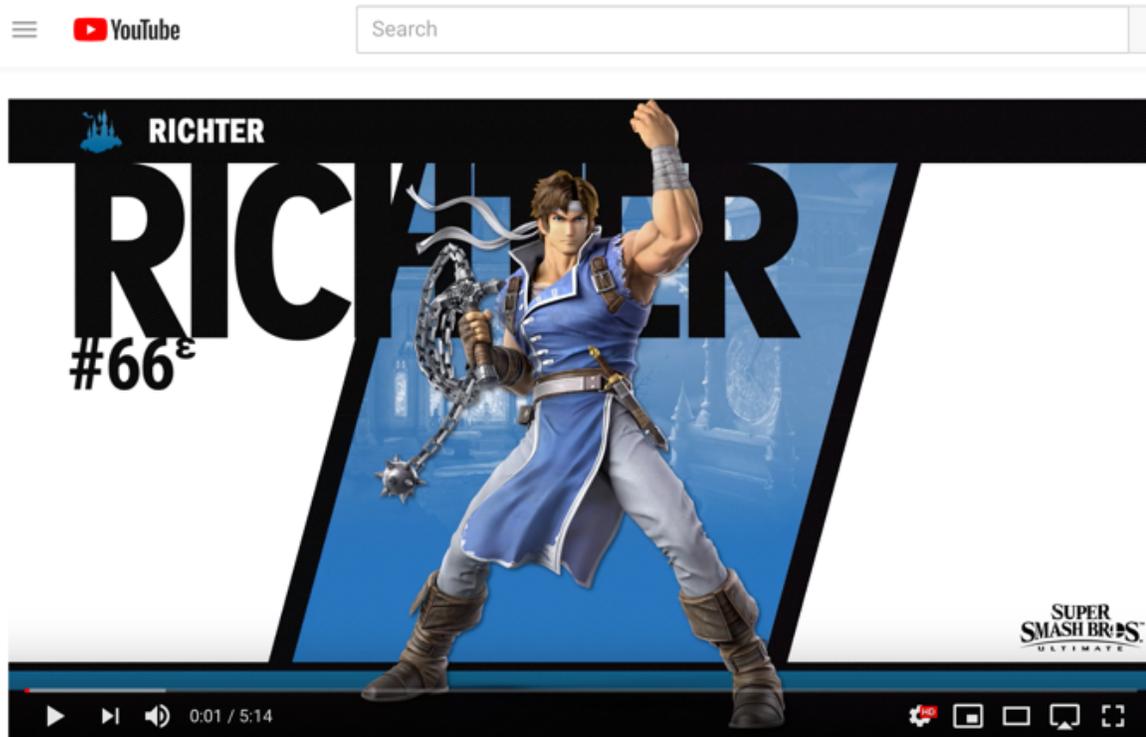
Click here to search Games ... 🔍

Feedback ▲

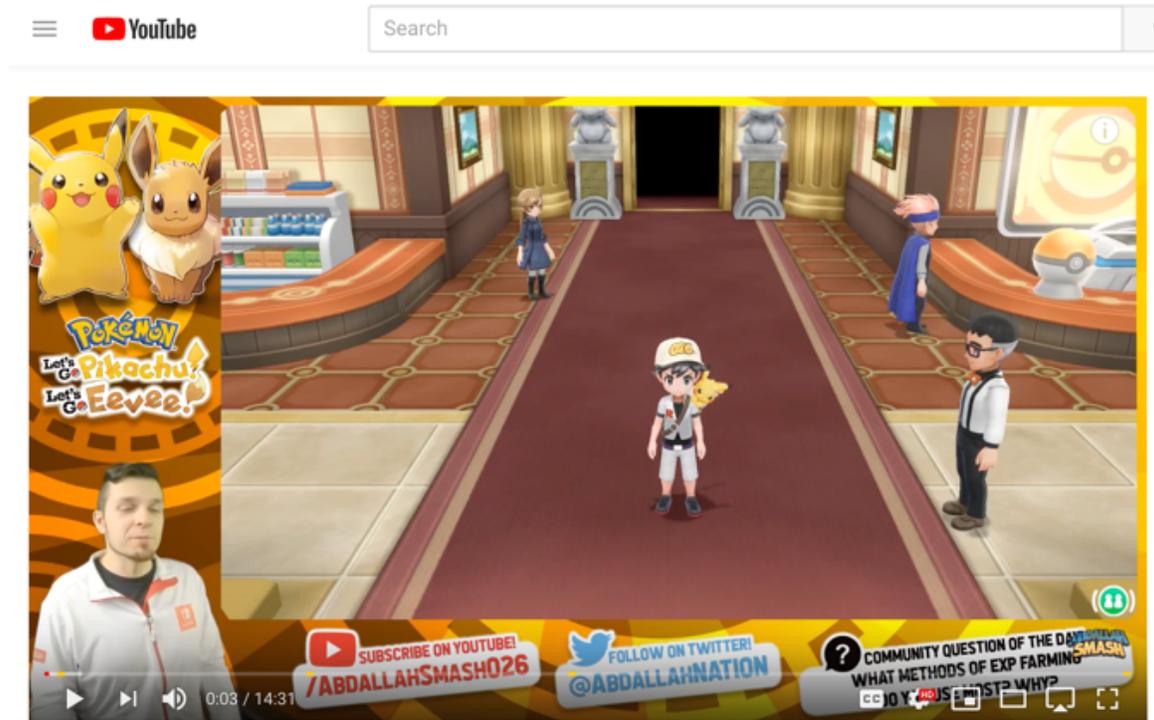
The advertisement for Mahjongg Solitaire features a vibrant background with a grid of Mahjongg tiles on the left and a decorative scene with a red plum blossom branch and a yellow chrysanthemum on the right. The tiles are arranged in a way that suggests a game in progress. The text "MAHJONGG SOLITAIRE" is prominently displayed in a red, stylized font at the bottom center. To the right of the image, there is a white text box with a yellow "PLAY NOW" button. The text in the box reads: "Mahjongg Solitaire presented by Target. Do you enjoy playing Mahjongg? Do you enjoy playing Solitaire? This game combines the best of both games for your total enjoyment and fun." There are also left and right navigation arrows on the sides of the advertisement.

# Long blacklists - Games

- Real-world game detections – YouTube videos of game walkthroughs



Vampire Killer - Castlevania [New Remix] Super Smash Bros Ultimate



#PokemonLetsGo #PokemonLetsGoPikachu #Pokemon  
BEST EXP FARMING Guide for Pokemon Let's Go Pikachu & Eevee

# Long blacklists - Games

- Real-world game detections – Google Sites and Reddit Discussions

The screenshot shows a Google Site with a green header and a dark sidebar. The main content area features a large white box with a red border containing the URL <https://sites.google.com/site/minimunch57games/red-ball>. A dark overlay with a search bar and a welcome message is visible at the top. The sidebar lists various game categories and titles.

**Games - Minimunch57**

Welcome to Minimunch57's Games! Here you can play your favorite flash games that I add! If you would like a game added head over to the Comments Page! If you need to contact me directly go to the Contact Page!

Search this site

Ok, got it

Red Ball FULL SCREEN

<https://sites.google.com/site/minimunch57games/red-ball>

**Comments**

You do not have permission to add comments.

- Home
  - Comments
  - Contact
  - FAQ/Common Issues
  - News
  - Shoutouts
- 2048
- Bartender: The Right Mix
- Bloons TD 4
- Bloons TD 5
  - Punblocked Games Version
- Box Head
- Box Head \*HACKED\*
- Bubblotanks III
- Burrito Bison Revenge
  - FantasyFlashGames Version
- Cat Mario
- City Siege
- City Siege 2
- City Siege 3
- City Siege 4
  - FantasyFlashGames Version
- Cover Orange
- Cover Orange 2
- Cover Orange 3
- Crush The Castle
- CS Portable (Unity)
- Cubefield
- Custom Car Shop
- Dead Paradise

The screenshot shows a Reddit post in the r/Yugioh101 subreddit. The post title is "[Question?] How to play Dinomasher's Fury". The post content includes a video link and a request for a breakdown of card interactions. The post has 4 comments, 63% upvoted, and is marked as archived. A comment by user Drumein is visible below.

reddit r/Yugioh101 Search r/Yugioh101

Join the discussion BECOME A REDDITOR

Posted by u/landsleaving 1 year ago

2 [Question?] How to play Dinomasher's Fury

I've just started learning the game after playing through most of Legacy of the Duelist, and picked up three Dinomasher's Fury decks. Finding it hard to get my head around all the things I can do with the deck. I'm playing the deck as put together in this video: <https://www.youtube.com/watch?v=087NbS4c1XY>

Is there a breakdown of how each card interacts with the deck, lines of play, that kind of thing available anywhere? Or can anyone point me in the right direction? Thanks!

4 Comments Share Save 63% Upvoted

**This thread is archived**  
New comments cannot be posted and votes cannot be cast

SORT BY BEST

Drumein 3 points · 1 year ago

I've been playing almost the exact same build for a couple of weeks now, I've just added 2 Earth True King. As for what I've seen until now, the deck pretty much plays around having a Ultimate Conductor Tyranno ready to summon at any point, so if you don't have it in hand you wanna add it by Soul Eating Ovi effect. Once you have it it's pretty easy to summon. If you dont have the true king, your best bet is to pop the babies with Soul Eating Ovi's effect, or with Lost Wolrd's effect (You can trigger it very easily by attacking a Token on you opponent field, then you protect it with lost world and pop a baby from your deck). Once you have a couple banished monsters, or 4 dinosaurs in grave (including a miscelaneosaurus) you can go for a massive Tyranno Infinity with a minimum 4k attack. The deck is fairly simple after a couple games and most of the time you are gonna be doing the same play every game. I hope I helped you at leas a bit with this text wall xD If you have any question about a specific interaction just feel free to ask

Share Report Save [https://www.reddit.com/r/Yugioh101/comments/69krqa/question\\_how\\_to\\_play\\_dinosmashers\\_fury/](https://www.reddit.com/r/Yugioh101/comments/69krqa/question_how_to_play_dinosmashers_fury/)

# Long blacklists - Games

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- By keywords on search
  - Game
  - Games
  - Fortnite
- But...students are smart
  - G a m e s
  - Ga mes
  - G ames
  - ...and so on
    - How many iterations of Fortnite?

# Long blacklists - Games

- Keywords – Snake...will you block Google? Or the word “snake”?

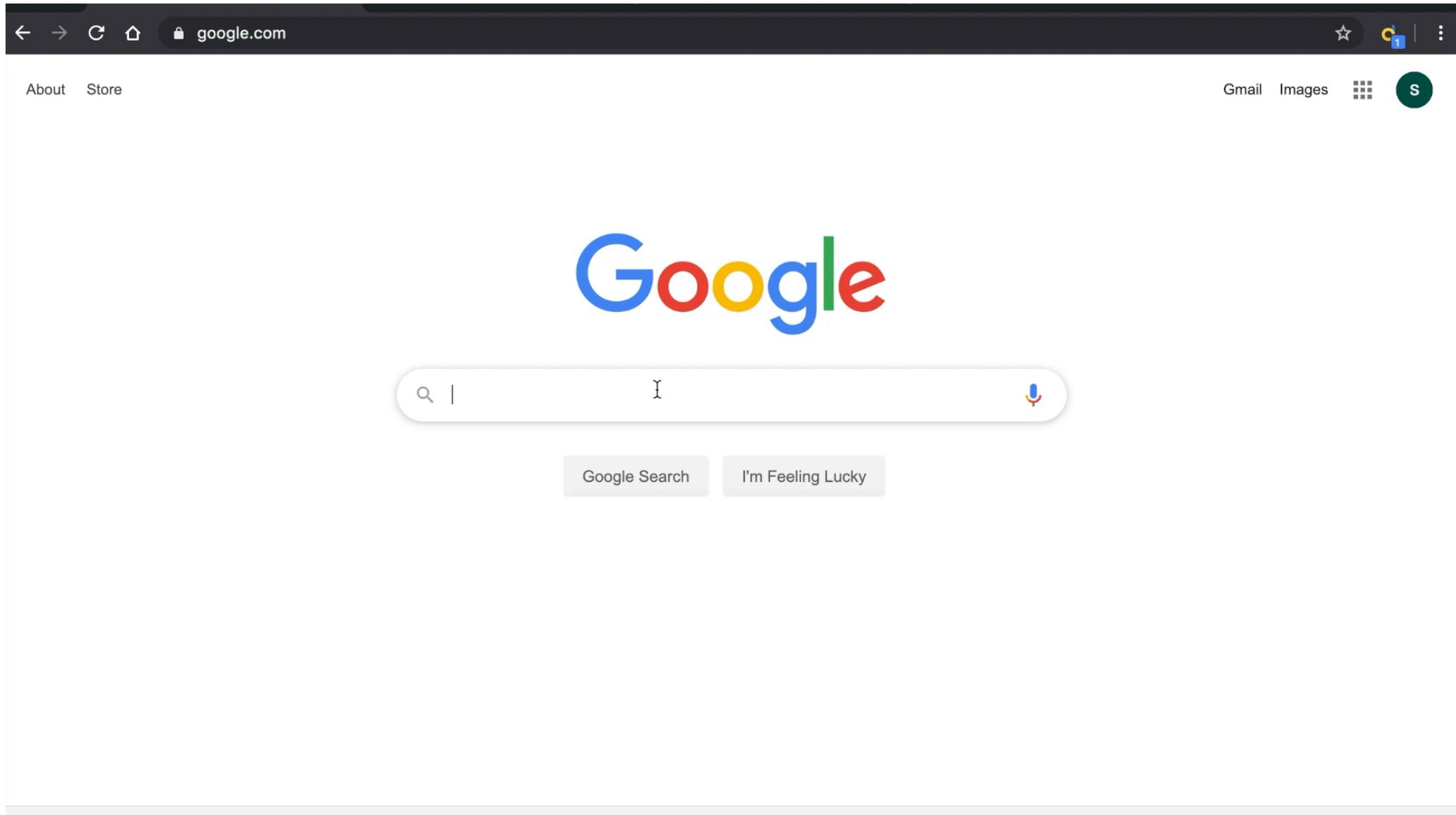
The screenshot shows a Google search for the keyword "snake". The search bar contains "snake" and the Google logo is on the left. Below the search bar, navigation links for "All", "Books", "Images", "News", "Videos", "More", "Settings", and "Tools" are visible. The search results indicate "About 644,000,000 results (0.40 seconds)".

The primary result is a game preview for "Snake". It features a blue snake on a green checkered field with a red apple. A "Play" button is present. Below the preview, there is a link to "snake.googlemaps.com" and a sub-heading "Play Snake on Google Maps" with a description: "Navigate different cities around the world in this rendition of the classic arcade game **Snake**."

Secondary results include a "Snake" video game genre entry with a mobile phone image and a Wikipedia-style text block: "Snake is the common name for a video game concept where the player maneuvers a line which grows in length, with the line itself being a primary obstacle. The concept originated in the 1976 arcade game Blockade, and the ease of implementing Snake has led to hundreds of versions for many platforms. [Wikipedia](#)".

Below the text block is a section titled "Games snake" with a "View 2+ more" link. It displays five game covers: "Snake Pass", "Metal Gear Solid", "Metal Gear Solid 3: Snake...", "Metal Gear 2: Solid Sn...", and "Metal Gear Solid: Th...".

# Solution: AI-based filter working in real time



# Over-blocking vs wide open policy – Social media

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- Before social media
  - Website content is coherent
    - The owners control the content
  - cnn.com: news
  - macys.com: shopping
  - playboy.com: adult
- After social media
  - Everybody is contributing content (user generated content UGC)
    - YouTube
    - Facebook
  - Every webpage is different and needs to be analyzed

# Over-blocking vs wide open policy – YouTube

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- YouTube as example
  - Over-blocking
    - Will you block all of YouTube and lose access to educational material such as Khan Academy videos?
  - Wide open policy
    - Even with keyword/URL blocking and YouTube safe mode, there still are issues.
    - Example: Mature content. Young children searching for words such as “kissing” or “bouncing balls” leads to trouble

# Unfortunate incidents – Schools in the news

## 2nd-grader got access to porn on school-issued iPad

By Leslie Brinkley

Tuesday, March 19, 2019

SONOMA, Calif. (KGO) -- A second grader got access to porn sites on her school-issued iPad and now the Sonoma Valley Unified School District is taking action to make sure it doesn't happen again. The incident happened last week at Prestwood Elementary School in Sonoma and this week the districts IT department is busy going through the browser history of iPads from five elementary schools.



## Springfield mom says young daughter saw porn on school issued Chromebook, district weighs in on changes

SPRINGFIELD, Mo. -- Some Springfield parents are concerned about inappropriate material that's accessible on their children's school- issued Chromebooks.

## The Detroit News

### Dearborn substitute teacher accidentally plays porn

Sarah Rahal, The Detroit News Published 1:33 p.m. ET March 27, 2019 | Updated 9:46 p.m. ET March 27, 2019



## Porn pops up on school-issued iPad after 9-year-old student searches for 'bouncing balls'

Updated Jun 16, 2019; Posted Jun 15, 2019

## Statesman

### Topless images prompt Eanes parents to take on school iPad program

Nearly 350 Eanes school district parents have signed a petition requesting the district place their children in a classroom that does not use iPads.

# The problem – Effect on kids



WATCH LIVE



SHARE



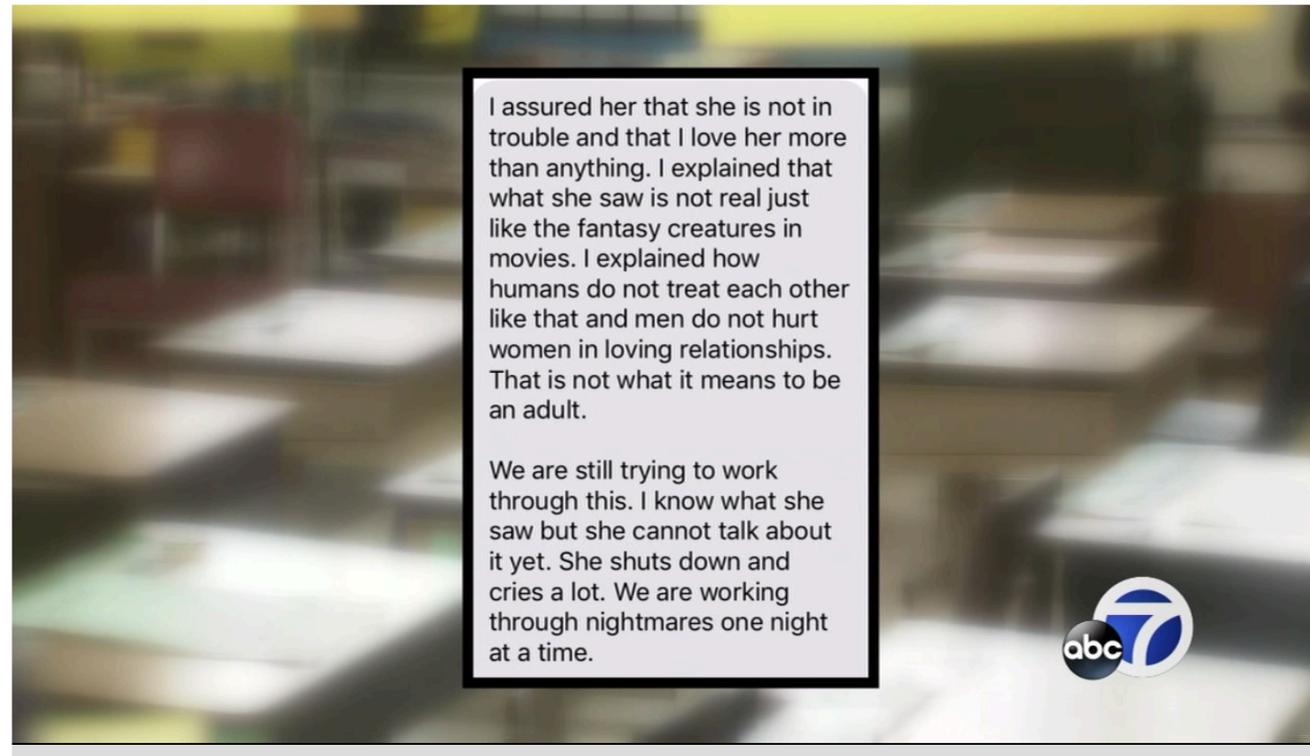
TWEET



EMAIL

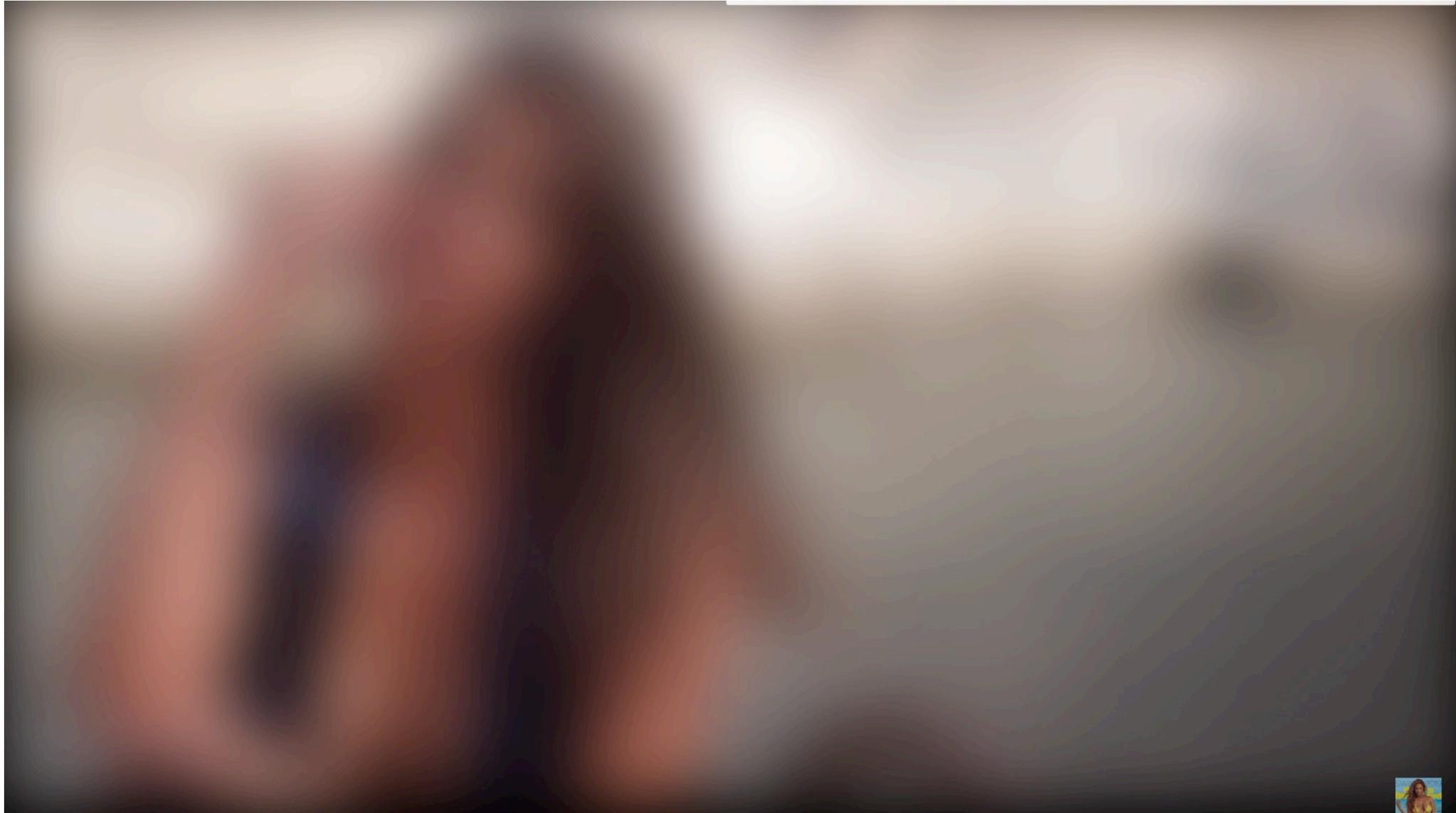
SOCIETY

## 2nd-grader got access to porn on school-issued iPad

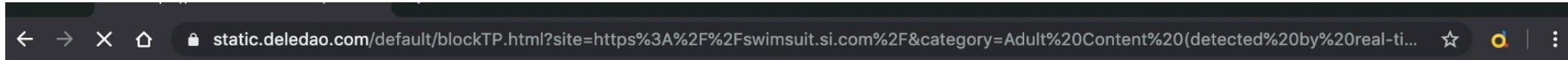


# Solution: AI-powered, real-time video analysis

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# Solution: AI-powered, real-time image analysis

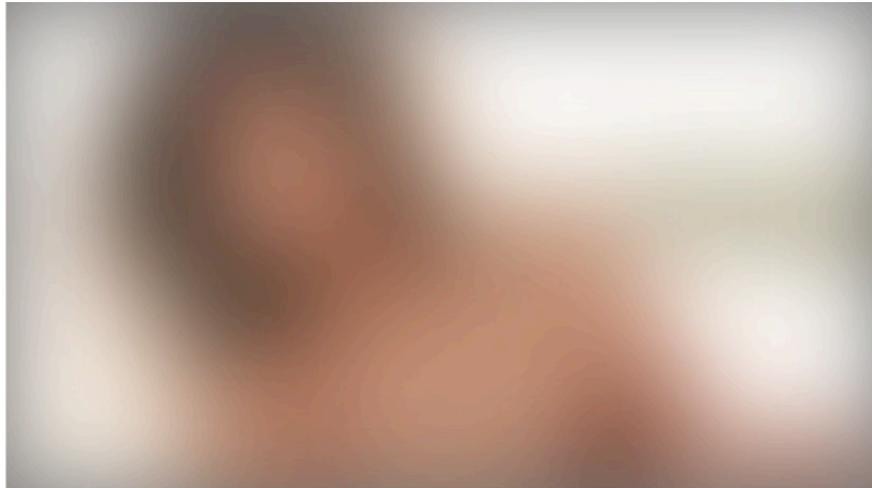


ROOKIE REVEAL: Josephine Skriver Will Shoot for SI Swimsuit 2020!

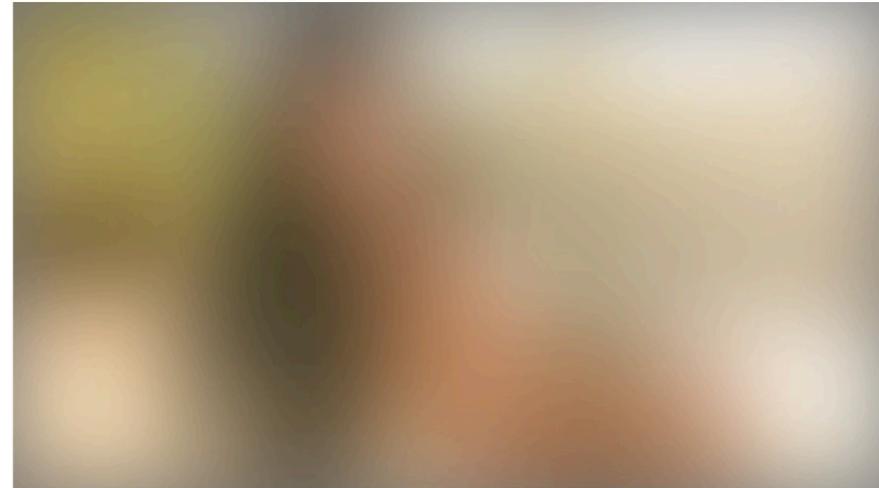
BY KELSEY HENDRIX · FEB 5, 2020

MODEL REVEAL: Anne de Paula IS Back for SI Swimsuit 2020!

BY KELSEY HENDRIX · FEB 4, 2020



MODEL REVEAL: Kelsey Merritt Shoots her Second SI Swimsuit Spread in the Dominican Republic!



ROOKIE REVEAL: Anita Marshall Is a 2020 SI Swimsuit Rookie

BY KELSEY HENDRIX · FEB 8, 2020

# Content filter proxies...better, but not good enough

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- Proxy Issues
  - Cumbersome HTTPS/SSL
  - Single point of failure
  - VPNs can get through

# Take this from someone who co-invented proxies

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- Shuang Ji, our co-founder, has 20+ years of experience in network filtering.
  - Co-invented proxy scanning and filtering in 1996.
  - Developed InterScan, the first network filtering product in the industry, in 1996

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**United States Patent**  
**Ji , et al.**

**5,623,600**  
**April 22, 1997**

**\*\*Please see images for: ( Reexamination Certificate ) \*\***

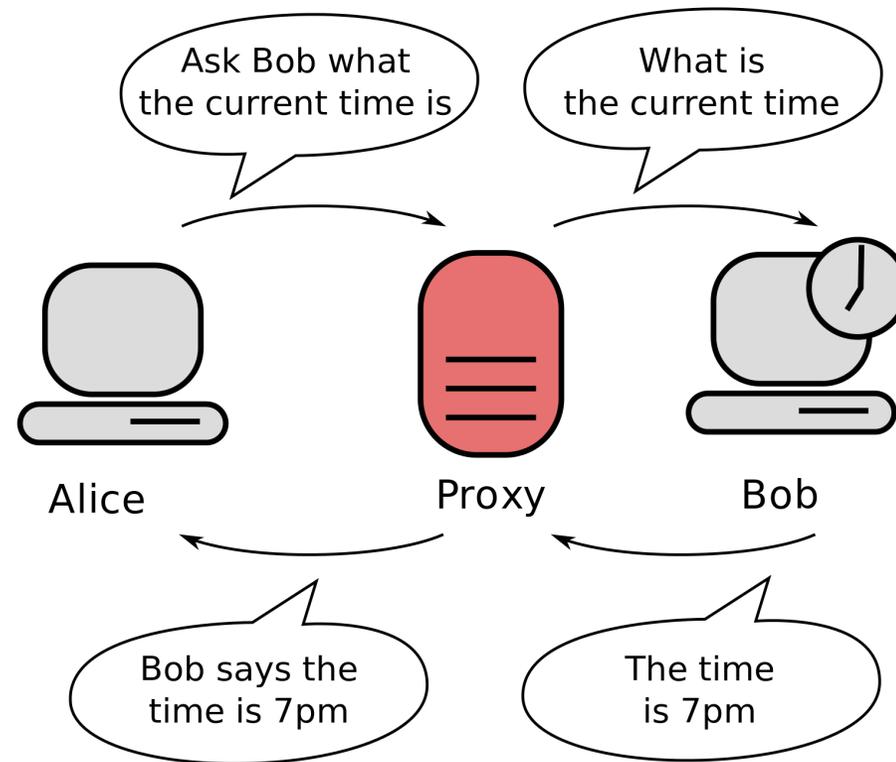
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Virus detection and removal apparatus for computer networks

- This technology, still being used as the base of almost all web filters today, is obsolete.

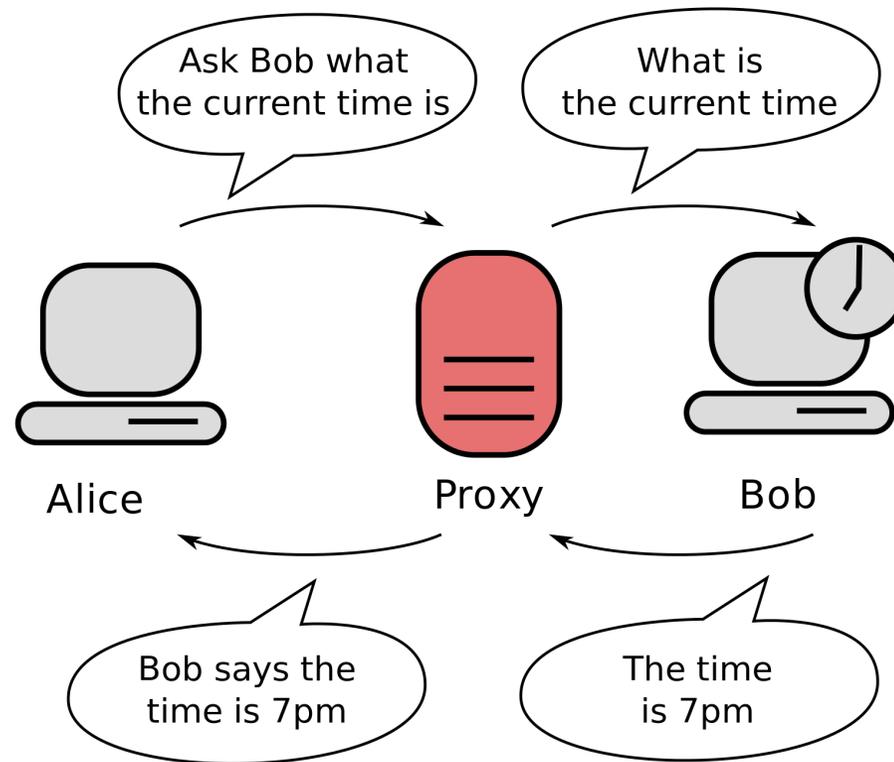
# HTTPS/SSL Encryption

- As the middle man, proxies either cannot see the encrypted info (fast) or has to decipher the info (slow)



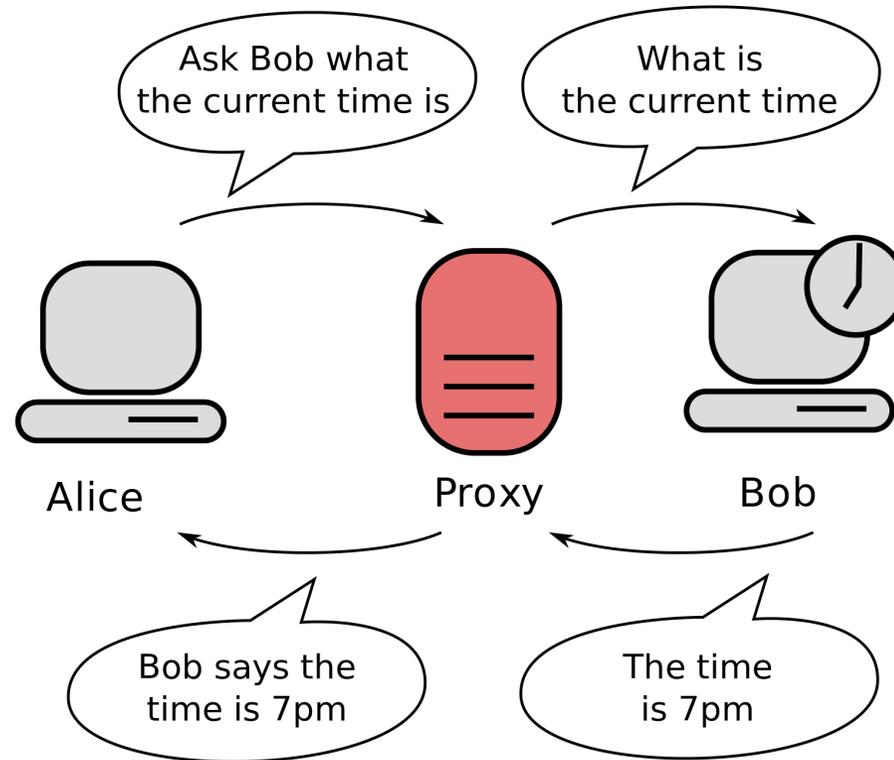
# Single point of failure

- If proxy is down, your entire network is down. Nobody can get on the internet. Alice cannot talk to Bob, or Adam, or Jack, or Andrew, etc.



# VPNs

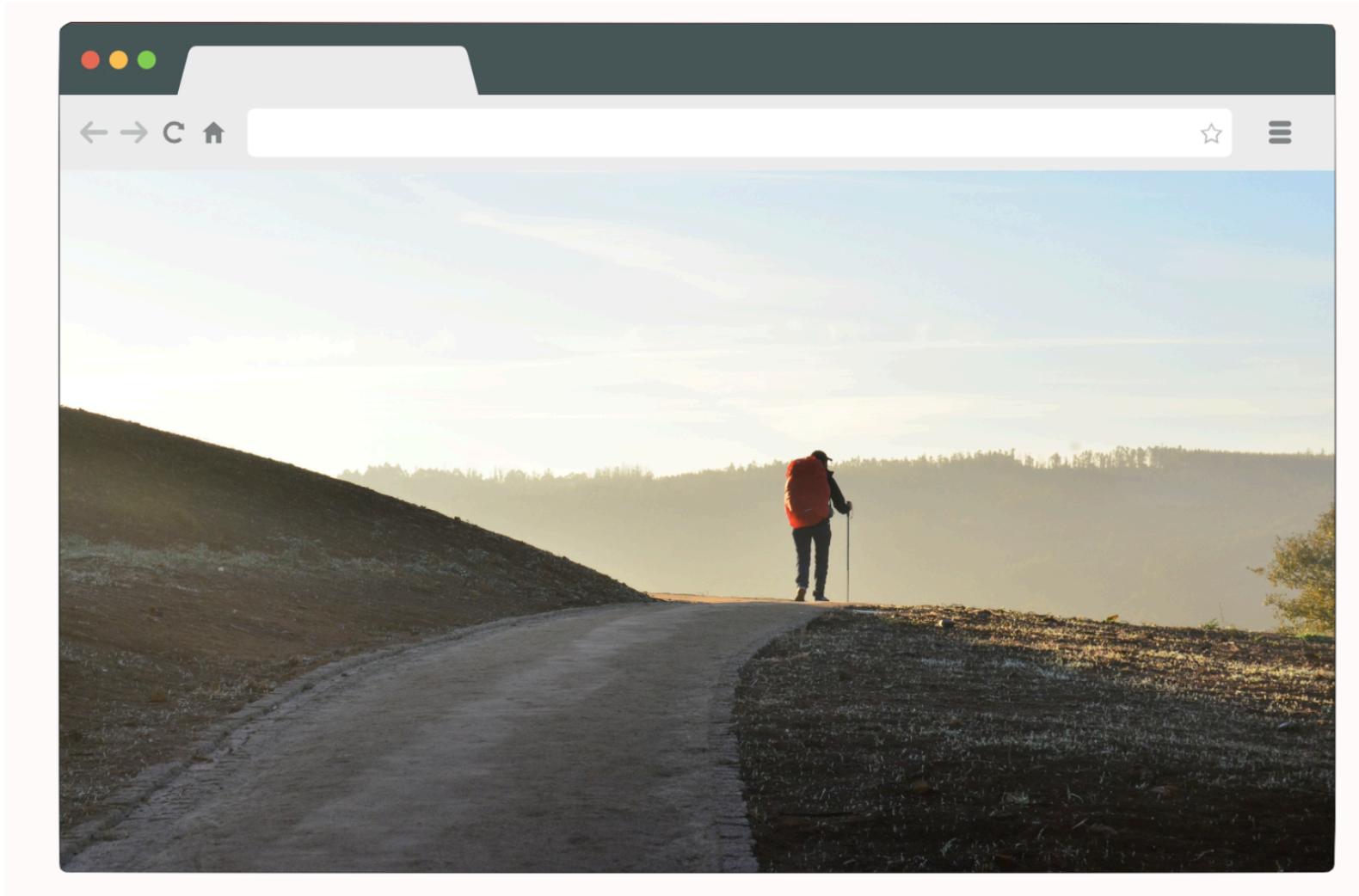
- If students use VPNs, then Alice can bypass your proxy to talk to whoever she wants to without you knowing. Your proxy no longer filters anything and no longer knows anything.



# Solution: Browser level protection

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- Install an AI-powered filter at the browser level



## Solution: Browser level protection (2)

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- Install an AI-powered filter at the browser level
  - HTTPS/SSL encryption not a problem, because browser sees everything in decrypted form already = better filtering, better reporting
  - No single point of failure. If one browser has an issue, limited to that browser on that device.
  - VPN-proof

# Dashboard

Dashboard

Reports

Policy Manager

Teacher-Approved Whitelist

Parent Portal

Configuration



Last 24 Hours

Last 7 Days

Last 30 Days

Select OUs



**8311**  
Total Violations

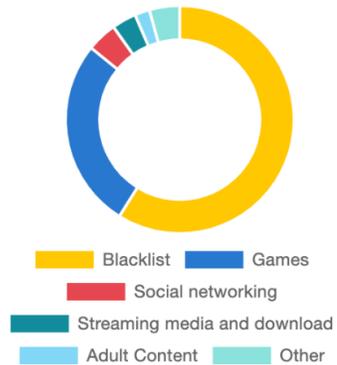
**2630**  
Real-Time Detections

**2882.3** hours  
Daily Avg Time

**1213.8** hours  
Social Media

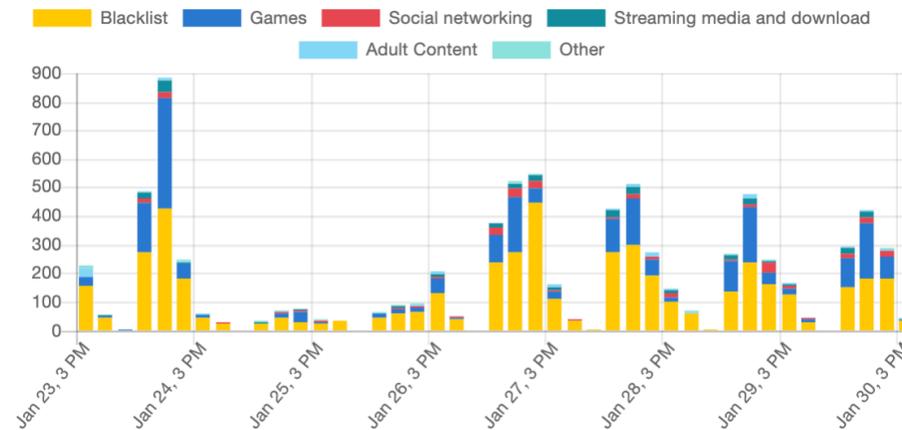
## Top Violation Categories

Top Violation Categories (Count)



## Violation Trend

Overview of violation trend by count



## Top Blocked Sites

Hostname	Count
www.google.com	2370
www.youtube.com	2033
www.abcya.com	319
doge2048.com	138
www.royalroad.com	130
www.pinterest.com	102

# Detailed reports - Blocked

## Blocked










	<a href="#">undertale.com - Google Search</a> Games,Games Student 1 (Student1@testschool.org)	Thu, Jan 30, 04:07PM	   
	<a href="#">avani's closet(@avanis.closet)   TikTok</a> Adult Content Student 2 (Student2@testschool.org)	Thu, Jan 30, 04:01PM	   
	<a href="#">ASMR - pink Chocolate Sticks Ice Cream Rolls   oddly satisf...</a> Blacklist Student 1 (Student1@testschool.org)	Thu, Jan 30, 02:08PM	  
	<a href="#">sans fight simulator github - Google Search</a> Games,Games Student 2 (Student2@testschool.org)	Thu, Jan 30, 09:23AM	   
	<a href="#">DOGE2048</a> Games Student 1 (Student1@testschool.org)	Thu, Jan 30, 07:33AM	   

# Detailed reports - Allowed

Allowed

Enter search terms Last 7 days ▾

Select Org Unit ▾ Select Student ID ▾ All Locations ▾ [Clear](#)

[Download This Report](#) < Newer Older >

<a href="#">NYC Breaking News And Local Stories Today – CBS New York</a> News and media studenta grade6 (studentag6@dldschoo.org)	Sun, Feb 23, 09:46PM	16.3 Secs	 
 <a href="#">New York News - New York Daily News</a> News and media studenta grade6 (studentag6@dldschoo.org)	Sun, Feb 23, 09:46PM	13.5 Secs	 
 <a href="#">ny news - Google Search</a> Search engines and portals studenta grade6 (studentag6@dldschoo.org)	Sun, Feb 23, 09:45PM	19.8 Secs	 
 <a href="#">Vacation packages in London - Google</a> Search engines and portals studenta grade6 (studentag6@dldschoo.org)	Sun, Feb 23, 09:44PM	1.6 Mins	 
 <a href="#">Hotels in London - Google Hotel Search</a> Search engines and portals studenta grade6 (studentag6@dldschoo.org)	Sun, Feb 23, 09:44PM	8.2 Secs	 
 <a href="#">Flights</a> Search engines and portals studenta grade6 (studentag6@dldschoo.org)	Sun, Feb 23, 09:43PM	9.8 Secs	 

# Better detection includes Student Wellness

Tue, Oct 15, 05:34AM	<b>Toxic Language Email</b>	Subject: Re: Recipients: someone show me a way to get out of here
Thu, Oct 10, 12:01PM	<b>Toxic Language Email</b>	Subject: Re: Recipients: im dying i hate this so much get me out of here

Tue, Oct 29, 09:45AM	<b>Self Harm Website</b>	<a href="#">anxiety suicide - Google Search</a>
Mon, Oct 28, 12:50PM	<b>Self Harm Website</b>	<a href="#">25 Extremely Easy Ways To Die That Will Make You Appreciate Life</a>
Mon, Oct 28, 12:49PM	<b>Self Harm Website</b>	<a href="#">easy ways you could die - Google Search</a>
Mon, Oct 28, 12:49PM	<b>Self Harm Website</b>	<a href="#">is it easy to die - Google Search</a>

# Granular policies

- No need to create new OUs just for a few students

## Create New Rule

[Reset](#)[Save](#)

### Rule

Rule Name

### Restrictions

Location

 On campus At home All locations

Org Units



Users



IP Ranges

(Example: 1.2.3.4-9, 1.2.3.4/24)

Time Range

Start time

End time

Repeat



Date Range

 Set start/end date

# Parent Portal (for admin)

- Directory management
  - Batch invite
  - View subscription status
  - Unsubscribe if necessary
- Control what policies parents can set for off-campus
  - Block additional categories
  - Block additional sites
  - Allow additional sites
- Customizable invitation email

Enter student, parent or OU name:  [Import parent directory](#)

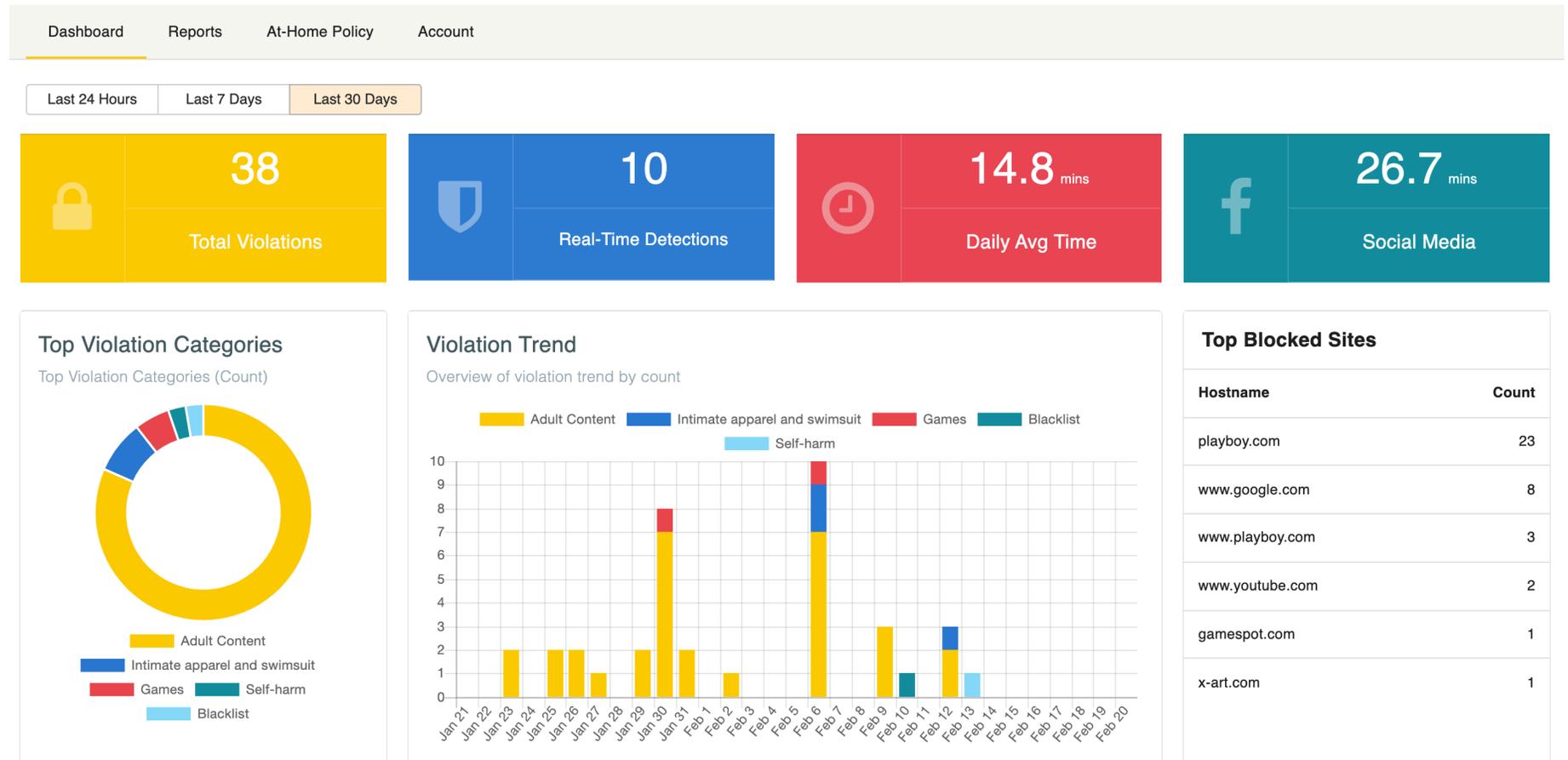
6 students, 12 parents, 1 subscribed, 2 unsubscribed, 9 invitations sent Show only off-campus activities to parents

Subscribed  Invitation sent  Unsubscribed  [Add](#) [Delete](#) [Send invitation email](#) [Unsubscribe](#)

<input type="checkbox"/>	Student	Student Email	OU	Parent	Parent Email	Status
<input type="checkbox"/>	Amy Newton	amy.newton@dld-demo.org	/Deledao/dld-demo.org/7th grade	Papa Newton	papa.newton@dld-demo.org	invitation sent
<input type="checkbox"/>	Amy Newton	amy.newton@dld-demo.org	/Deledao/dld-demo.org/7th grade	Mama Newton	mama.newton@dld-demo.org	invitation sent
<input type="checkbox"/>	Dan Williams	dan.williams@dld-demo.org	/Deledao/dld-demo.org/9th grade	Papa Williams	papa.williams@dld-demo.org	invitation sent
<input type="checkbox"/>	Dan Williams	dan.williams@dld-demo.org	/Deledao/dld-demo.org/9th grade	Mama Williams	mama.williams@dld-demo.org	invitation sent
<input type="checkbox"/>	David Swanson	david.swanson@dld-demo.org	/Deledao/dld-demo.org/8th grade	Papa Swanson	papa.swanson@dld-demo.org	invitation sent
<input type="checkbox"/>	David Swanson	david.swanson@dld-demo.org	/Deledao/dld-demo.org/8th grade	Mama Swanson	mama.swanson@dld-demo.org	unsubscribed

# Parent Portal (for parents)

- Weekly email reports
- Additional control with online parent portal
  - Dashboard
  - At-home policies
- Mobile app



# Parent Portal (for parents) - 2

- Parents can change settings for at-home device use, but school settings take precedence

## Settings

### Privacy protection

Block ads  Enabled

Block third-party tracking  Enabled

### Content safety

YouTube safe content  Enabled

Google, Yahoo, Bing safe search  Enabled

### Real Time Analysis

Real-time text analysis  Enabled

Real-time image analysis  Enabled

Image sensitivity setting

low medium high

Real-time video analysis  Enabled

Video sensitivity setting

low medium high

# Parent Portal (for parents) - 3

## Blocked

Enter search terms

Last 30 days



< Newer Older >



[how to commit suicide - Google Search](#)

Self-harm

Fri, Feb 14, 12:10AM



[SI swimming suit - Google Search](#)

Intimate apparel and swimsuit

Thu, Feb 13, 07:13PM



<http://playboy.com/>

Adult Content

Thu, Feb 13, 07:12PM



<http://playboy.com/>

Adult Content

Thu, Feb 13, 07:12PM



<http://gamespot.com/>

Blacklist

Tue, Feb 11, 11:00AM



# Teacher-approved whitelists

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## Configuration

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Enable teachers to add webpages to whitelist

Enabled

Teachers can approve webpage access for

- Requesting student only
- Requesting student's OU
- Entire school

Teachers can approve webpages for a maximum period of

60

days

The scope of webpages teachers can approve

- Entire website, excluding search engines, social media, personal web sites, file sharing and storage and streaming media sites (e.g. YouTube.com)
- Entire website with no restriction
- Exact URLs only

# Easy deployment

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- No hardware, no proxy, no downtime
- No SSL certificates to deploy
- VPN-proof
- Cross-platform
  - Chromebooks
    - Extension
  - Mac and Windows
    - Browsers
    - Chrome extension
  - iPad native browser app
    - Works as well off-campus as it does on-campus



# Summary

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- AI protects students on campus, off campus, on any device



**Q&A**

**kevin.kuckkan@deledao.com**

[www.deledao.com/education](http://www.deledao.com/education)

Want more info?

