

Scaling ad-filtering technology

For almost a quarter of a billion users (and counting)

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Talking points

1

What is Ad Filtering and why should you care?

2

Scaling ad filtering technology
- how we adapt our product portfolio.

3

Basis of it all are Filterlists
- how we want to automate.



eyeo... Who?



Most popular

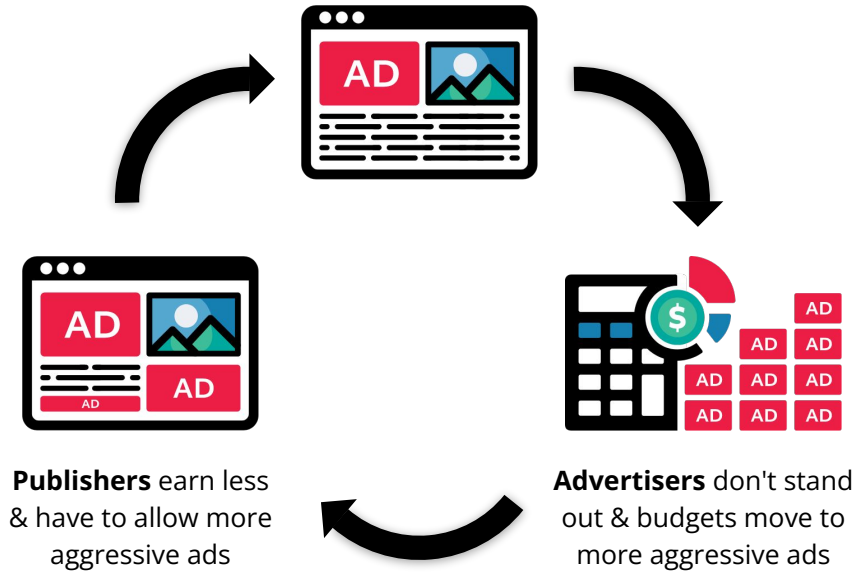
- **Most popular browser extensions worldwide**
- **Technology available on all major browsers and platforms**



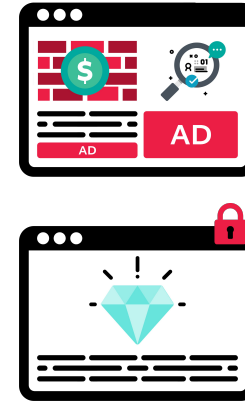
The problem

User has no control

Users see more ads



Result

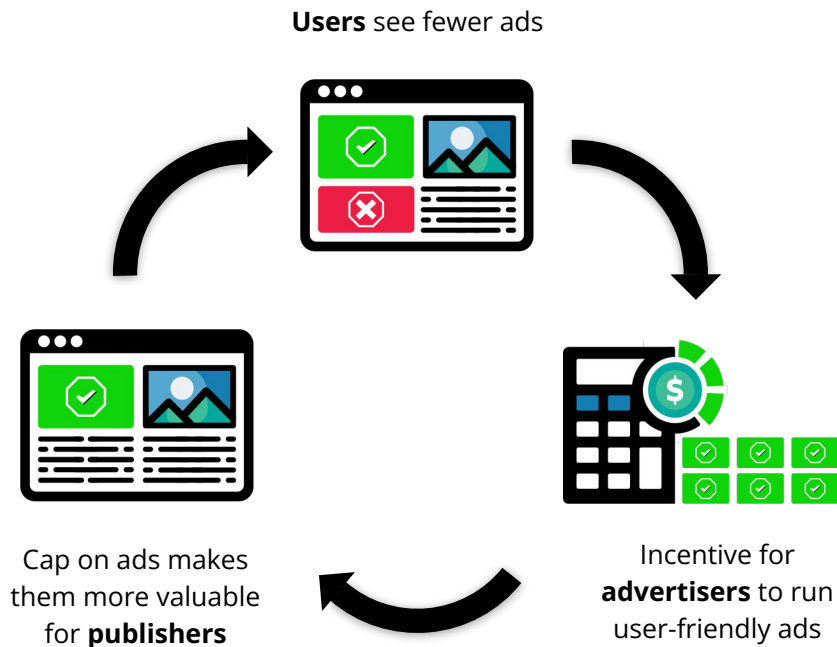


Content becomes less conveniently and openly accessible.



The solution

User has control



Result



Diverse and valuable content remains accessible as a public resource



Our mission

For the value exchange to have any impact,
it must be sustainable, which requires a
balance in power.



Empowering a balanced and sustainable online value exchange



Our solutions give power
to the stakeholders.



Each side gets something out of
the exchange.



Our vision

Any value exchange that is
balanced between all sides;
everyone benefits.



Putting you in control of a fair and prosperous internet



We aim to create solutions that give all
stakeholders choice in how the internet
works best for them.



The healthier and stronger
the ecosystem, the more
enduring it will be.



Next at eyeo:
1 billion users



Scaling ad-filtering technology

How we adapt our product portfolio



Our product journey to grow our user base to 220m users and further

More Users → More Publishers → More Revenue

Monthly Active Users is one of our key success metrics. How do we get more users?

Direct user Desktop



Web Extensions
Desktop Browser:



Acceptable Ads Opt-Out!

Direct user Mobile



AdBlock Browser

Extensions
Samsung Internet
Browser:



FF Extension
(out of support)

Partnerships Mobile

Android
Chromium SDK

iOS
SDK

WebView
SDK
(out of support)

Partnerships Desktop

Chromium
SDK

Javascript
SDK

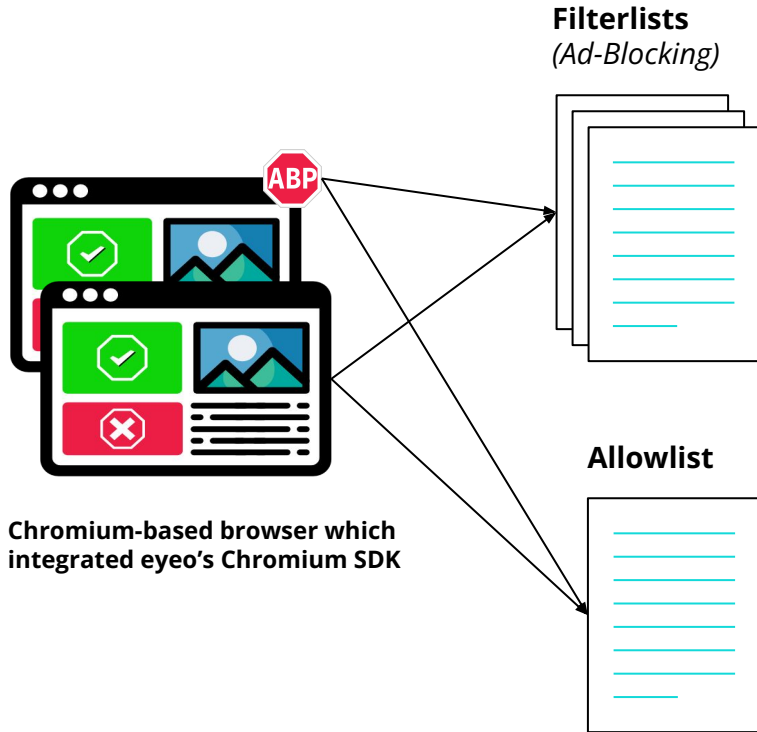


Filterlists & Allowlist **the basis of it all**

How we want to automate



Filterlists & Allowlist



- Sets of filter rules that automatically remove unwanted content from websites, including annoying ads, bothersome banners and troublesome tracking
 - Regular expressions in text files
 - Ownership: external Filterlists (Open Source)
eyeo products uses these filter lists for blocking
-
- Contains whitelisted publishers
 - Contains exception rules for acceptable ads
 - Ownership: editing & maintaining by eyeo



Filterlists: facts & figures

```
! :partner_token=BuySellAds
! :partner_id=2476edbd2862931e
! :type=partner
! :forum=https://adblockplus.org/forum/viewtopic.php?t=9518
! Static text/image ads by InFluAds
@@||influads.com*$script,image
#@@##influads_block

! :partner_token=Amazon Advertising
! :partner_id=ec725ef475df5236
! :type=partner
! :forum=https://adblockplus.org/forum/viewtopic.php?f=12&t=9791
! Amazon text ads
@@||d14qd3he45186l.cloudfront.net/ads-
search*.html$subdocument,document,domain=amazon.com|amazon.ca|amazon.de|amazon.co.uk|amazon.fr|amazon.es|amazon.it|amazon.co.jp|amazon.cn|amazon.com.au|amazon.com.br|amazon.in|amazon.com.mx|amazon.nl
@@||adsensecustomsearchads.com/adsense/search/async-ads.js
@@||adsensecustomsearchads.com*$elemhide,document,subdocument,domain=d14qd3he45186l.cloudfront.net

! :partner_token=Lund1 Mail and Media GmbH
! :partner_id=f43b2628cd9d9b5
! :type=partner
! :forum=https://adblockplus.org/forum/viewtopic.php?f=12&t=9851
! Sponsored search results on 1&l1 websites
@@||search.lund1.de*$elemhide
@@||suche.lund1.de*$elemhide
@@||suche.web.de*$elemhide
@@||suche.gmx.net*$elemhide
@@||search.gmx.net*$elemhide
@@||suche.gmx.at*$elemhide
@@||suche.gmx.ch*$elemhide
@@||search.mail.com*$elemhide
```

- Provide information what to block/hide
- Open source
- Big community
- > 40 languages
- > 500 filter lists
- Most widespread filter list is the **Easylist** with
 - > 80 000 filter rules
 - > 400 commits per week
 - > 40 authors
- After blocking ads, potential whitespaces or ad containers are hidden using element hiding which effectively rearrange the webpage. Websites don't look broken!



CHALLENGE: a lot manual processes with the Filterlists and our Allowlist

Filterlists

Ensure quality of Filterlists

- Filter rules can break websites!
- No prediction possible before rolling out changes on filter lists!
- Too conservative vs. too liberal
- Eyeo distributes filter lists from external authors and has to ensure the quality!
- Helping tools: Monitoring, Crawling, Manual testing

Anti-Circumvention

- Website operators take action against ad blocking → Circumvention
- eyeo takes action against circumvention → anti-circumvention
- “Cat-and-mouse-game”
- Detection of circumvention based on user-reports & monitoring

Allowlist

Maintaining Allowlist:

- adding / removing publisher and acceptable ads partners

Ensure Acceptable Ads Standard:

- Checking continuously the most important websites
- Complete manually with some helping tools

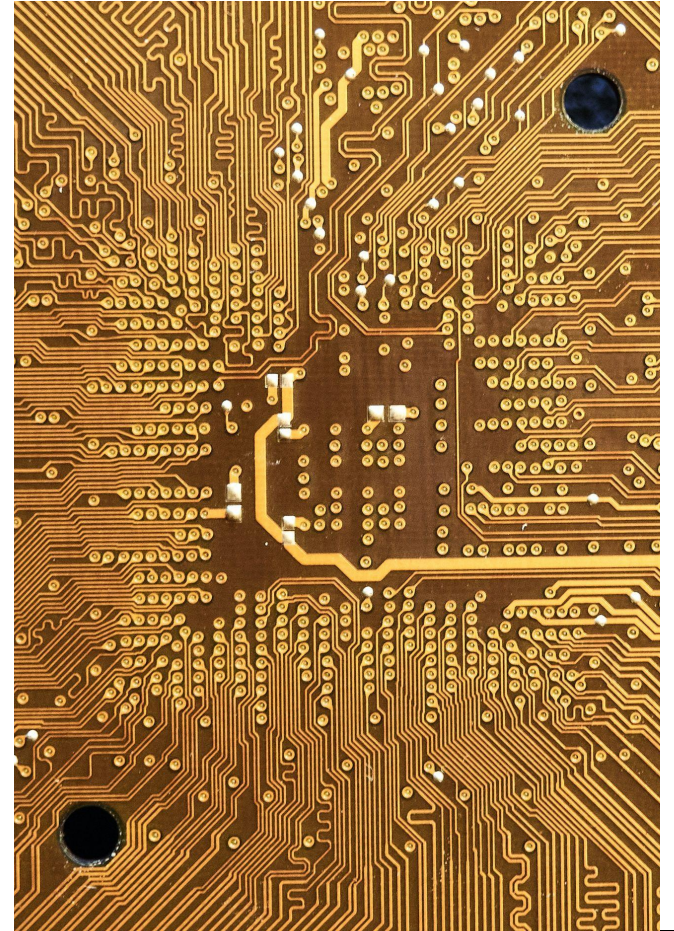
Project Moonshot: Automation of Ad Filtering

VISION

We want to filter ads automatically

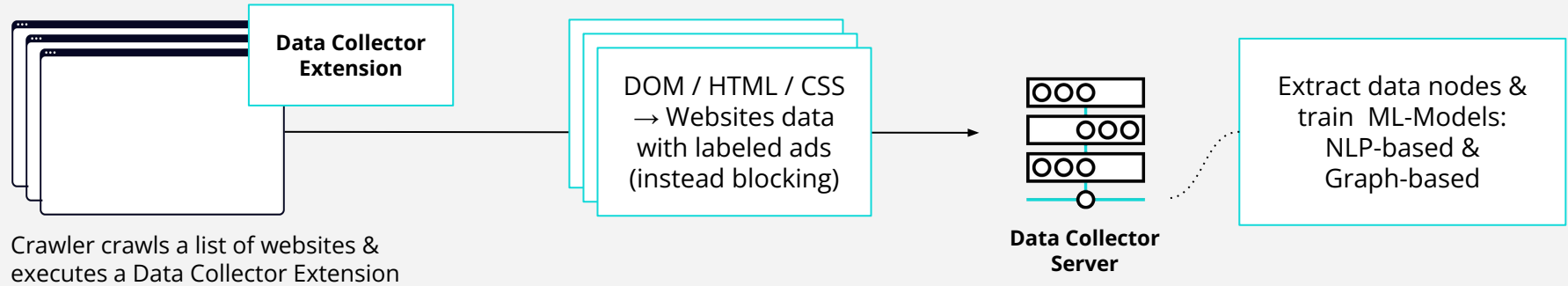
Our Motivation

- Reduce human intervention
- Improve efficiency with automation
- Be the best in ad filtering
- Cutting-edge in the ad-blocking space

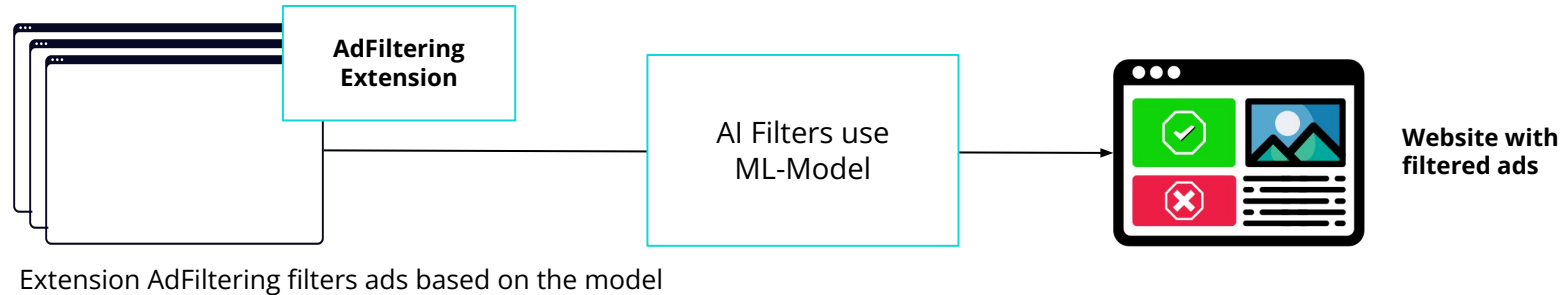


Automated Ad Filtering via Machine Learning

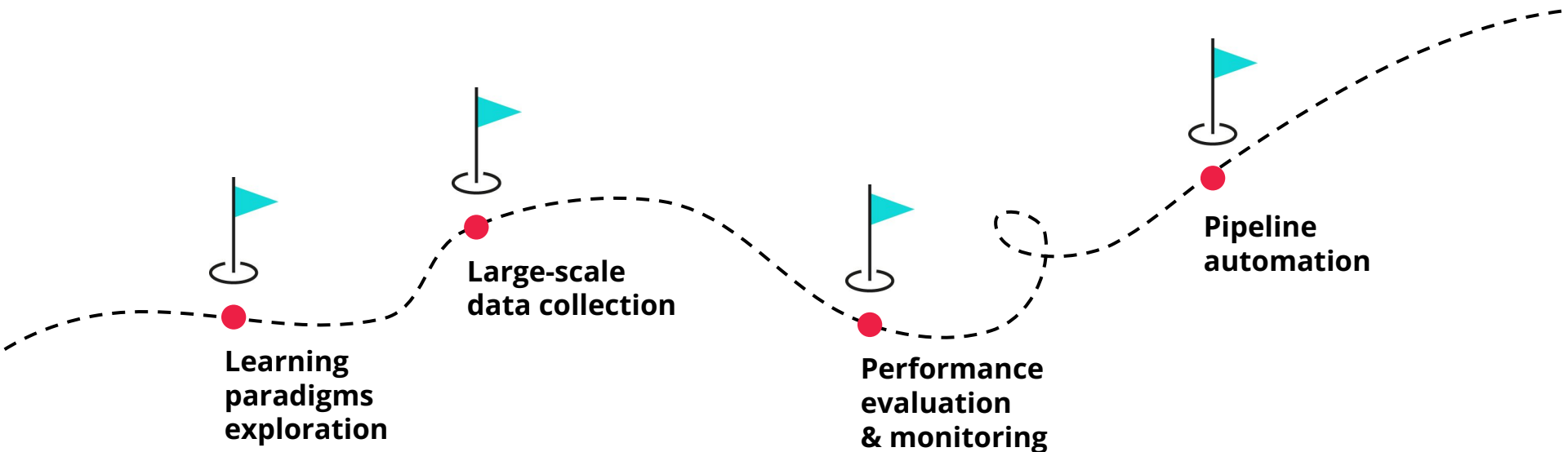
Collecting data & training the model



Automated Ad Filtering using the model



Project Moonshot Journey ahead



Summary and next steps

- 1 Scaling is a journey
- 2 Automation is crucial
- 3 Open questions

Want to help us grow our vision and fundamentally change how online advertising works?

Get in touch!



Thank you. Questions?



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