



MyDAD

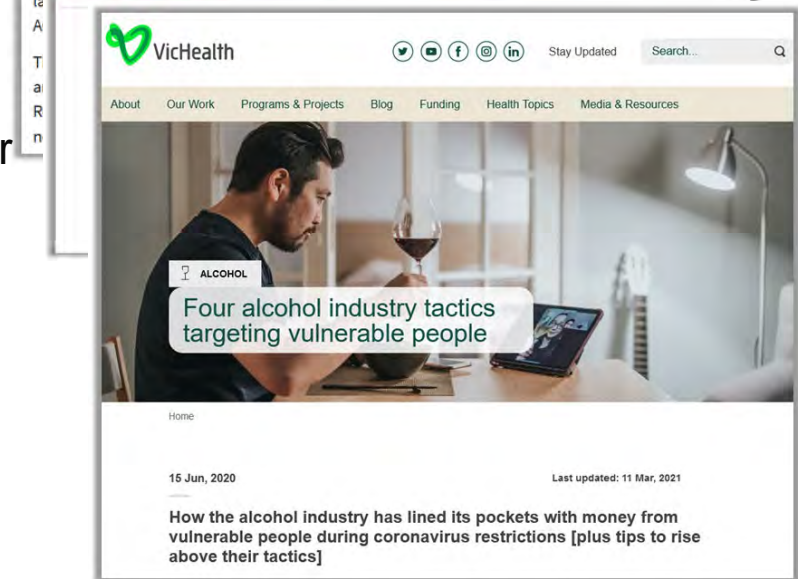
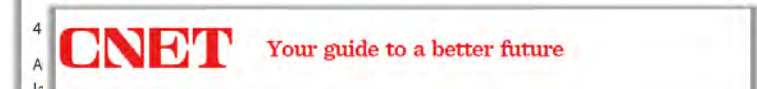
Empowering users to protect themselves from harmful advertising online



The Problem

Targeted online advertisements are a vector for numerous harms.

Users have limited tools available to protect themselves from dark ads.





Our Solution

A smartphone application that **empowers users** to protect themselves from **harmful advertising online**

- Create **awareness** about how you are targeted
- Provide opportunities for **collective and individual action**

Introducing... Your Digital Ad Double

Draw Characters with Watercolor and Ink

A course by Agnès Ernoult



Expressive Character Design with Watercolor... [Learn more](#)
2020 Students

What women in the same demographic sees

Peer User

18-24 y/o

Woman

Australia

Create and animate your own characters

A course by Laura Ewing Ferrer



Character Creation for Animation: Shapes, Co... [Learn more](#)
5578 Students

What an older demographic sees

YOU

18-24 y/o

Man

Australia

Learn Video Game Design

A course by Leartes Studios



Game Environment Design: Cyberpunk Sc... [Learn more](#)
2710 Students

Peer User

24-30 y/o

Man

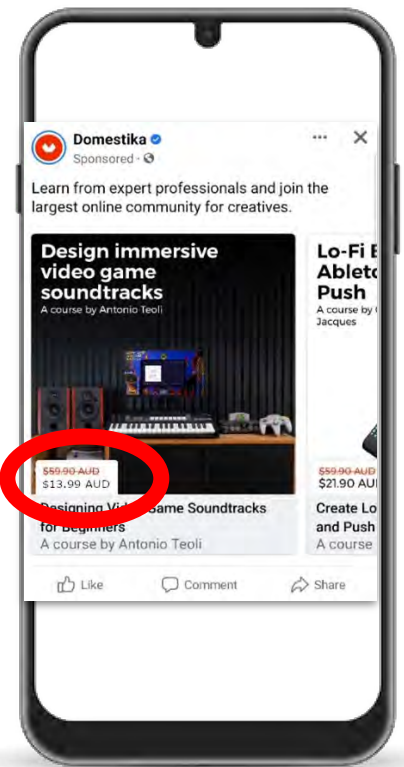
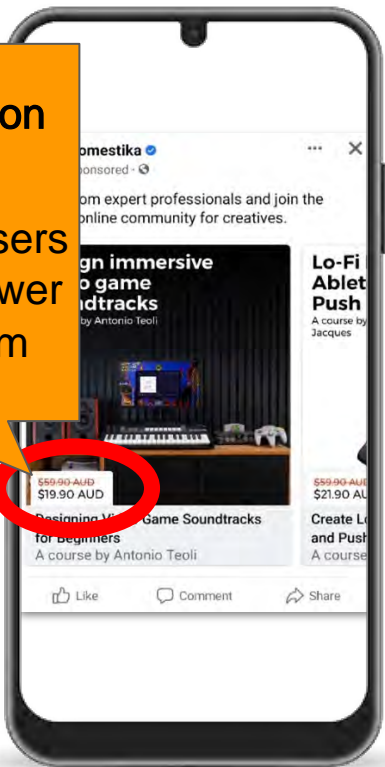
Australia

Real-time notification of harmful ads



Price discrimination detected

Other MyDAD users were shown a lower price for this item

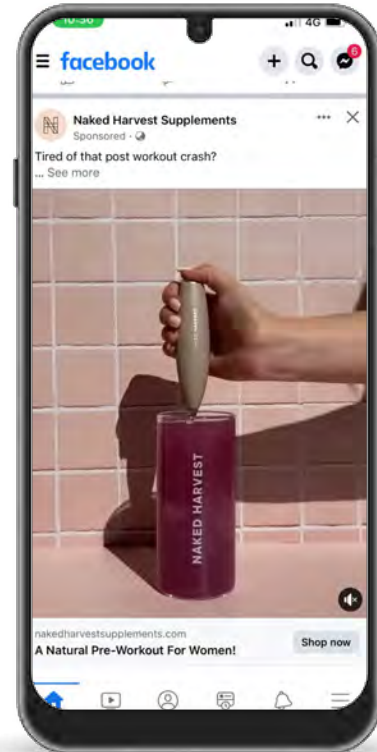


- Illicit price discrimination
- Known scams
- Product recalls
- Misinformation

Streamlined, off-platform reporting of harmful ads

Assist users to report harmful or illicit advertisements to relevant regulators and advocacy groups

- **Medical ad** - TGA
- **Misleading and deceptive conduct** - ACCC
- **Scams**- ACCC, ATO, ACCAN
- **'Finfluencer'** - ATO



1. User sees suspect ad in their feed
2. Pull-down notification panel, select **Report Ad**
3. Screen capture is analysed to detect advertisement type
4. Ad, contextual info, relevant user details automatically sent to appropriate authority

Feasibility - how does this all work?

- On-device app runs in the background, recording screen content
- When phone is plugged in, Machine Learning processing detects ads and uploads to server
- Feasibility demonstrated in Krieter's 2020 PhD thesis [1] and **open source** code

Tech Stack

- **Front end:** Android MediaProjection API / TensorFlow Lite
- **Back end:** AWS Server instance / Machine Learning library to cluster ads by campaign / process and detect harmful ads

[1] <https://github.com/pkrieter/android-background-screen-recorder>



Looking Inside

Mobile Screen Recordings as a Privacy Friendly
Long-Term Data Source to Analyze User Behavior

Feasibility - near -future possibilities

Realtime on-device detection- efficient background processing of screen contents

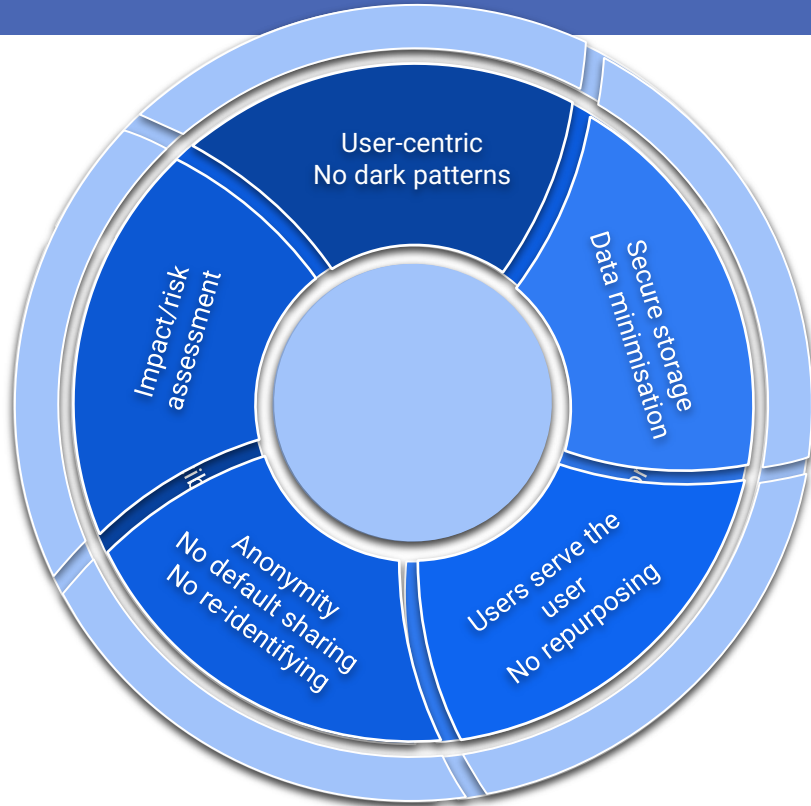
- Enabled by **Tensor cores** on mobile (iPhone, Android since 2021)

iOS Support- Apple API presently makes user experience more painful.

Remaining challenges

- Collecting targeting info on mobile devices. Bot accounts? Desktop users? Proxy approaches?
- Potential for legal opposition from platforms

Privacy and Ethical practice



- Privacy embedded in the design of our system
- No personal data transmitted off-device
- Servers comply with international regulations for P.I.I. data storage

Potential for Impact

- User **empowerment**
- **Collective** visibility
- Shorten the life of **scams**/ other harmful ads
- **Collective** action (fellow users, regulatory bodies, watchdog organisations, government policy)

'Your year in Ads'



When has public awareness led to action?

CNET

Your guide to a better future

Culture

Facebook facing backlash from privacy violations

Facebook has gone off its site....

Matt Asay

Nov. 20, 2007 9:43 p.m. PT

Wow. Just when you think that it's spying on you "friends." [The Wall Street Journal](#) reports activities outside of Facebook friends within Facebook.

Creepy, indeed.

Facebook is facing its biggest backlash as advertiser boycott gains momentum

"There's never been pressure on Facebook like there is right now," one tech expert said.



Commissioner launches Federal Court action against Facebook

9 March 2020

Tags: media release



The Australian Information Commissioner has lodged proceedings against Facebook in the Federal Court, alleging the social media platform has committed serious and/or repeated interferences with privacy in contravention of Australian privacy law.

The Commissioner alleges that the personal information of Australian Facebook users was disclosed to the *This is Your Digital Life* app for a purpose other than the purpose for which the information was collected, in breach of the *Privacy Act 1988*.

The information was exposed to the risk of being disclosed to Cambridge Analytica and used for political profiling purposes, and to other third parties.

"All entities operating in Australia must be transparent and accountable in the way they handle personal information, in accordance with their obligations under Australian privacy law," Australian Information Commissioner and Privacy Commissioner Angelene Falk said.



Summary

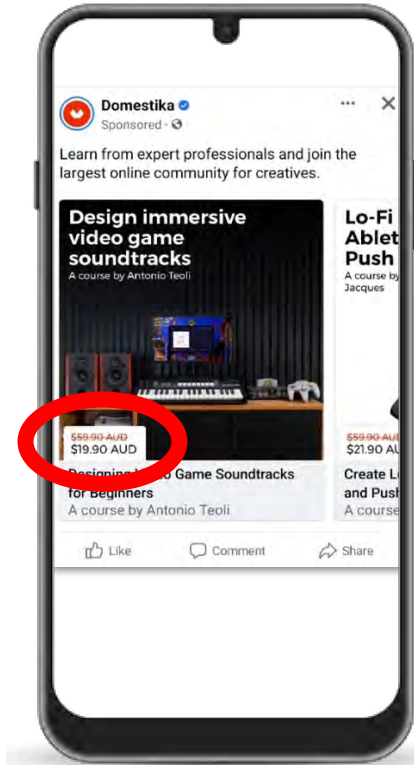
MyDAD- a tool for enabling users to be empowered users to protect themselves online

Hi DAD, I feel unsafe online.

Hi unsafe online, I'm DAD

DAD's got your online back, so come be part of the ad transparency family!

Streamlined, off-platform reporting of harmful ads



Our serverside backend uses ad targeting data to automatically detect and report illegal advertising practices

- E.g. Discriminatory pricing based on protected attributes



**Thank
You!**

