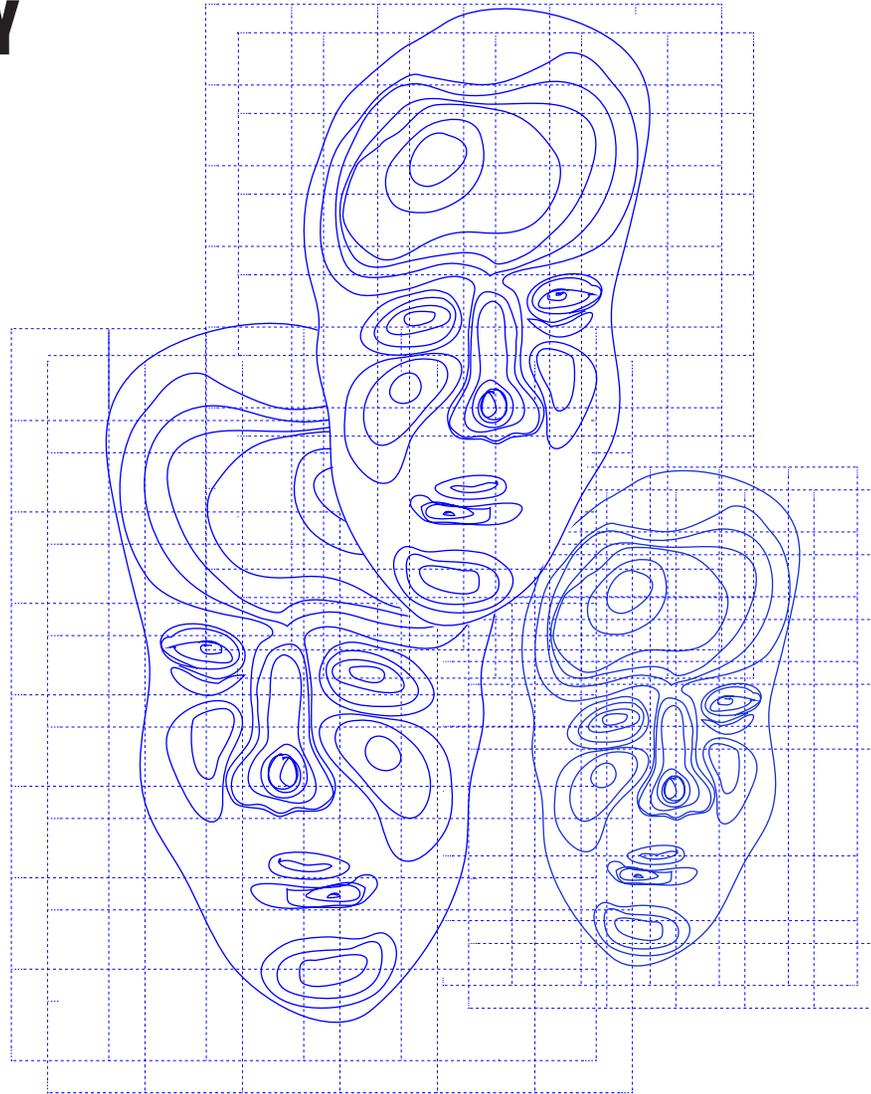


REIMAGINING VISUALS FOR CYBERSECURITY

Finalist Catalog



openIDEO

WILLIAM + FLORA
Hewlett
Foundation



WELCOME

Welcome to The Cybersecurity Visuals Challenge Finalist Catalog!

As we launched this Challenge in July 2019, we asked a global community: **“How might we reimagine a more compelling and relatable visual language for cybersecurity?”** We were looking for visual creators from diverse backgrounds eager to apply their skill set to this important work.

In total, we had 165 unique visual creators submit 209 ideas from 14 countries across 6 continents. We’re thrilled to announce the five

Top Ideas and samples of their work in this catalog:

Abraham Pena, United States of America
Afsal CMK, India
Claudio Rousselon, Mexico
Ivana Troselj, Australia
Mariah Jochai, United States of America

We’d also like to congratulate the other 18 shortlisted finalists whom you can also learn more about in this catalog. We are grateful for their collective work that has already helped to elevate the visual language of cybersecurity, and hope that you’ll utilize their designs in the future. We welcome you to browse the [full submissions here](#), which are openly licensed for your use.

This Challenge would not have been possible without the support, commitment, and time from our many partners. Join us in thanking:

AJ Grotto, Stanford University
Andreas Kuehn, EastWest Institute
Burton Rast, Google
Charlotte Stanton, Carnegie Endowment for International Peace
Chelsea Takamine, OpenIDEO
Dima Boulad, OpenIDEO
Eli Sugarman, Hewlett Foundation
Heath Wickline, Hewlett Foundation
Heather King, Cyber Threat Alliance
Herb Lin, Stanford University
Jen Ellis, Rapid7
Jim Baker, R Street Institute
Joanne O'Connor, Hewlett Packard Enterprise
Jonathan Barrett, Vectra AI
Kristy Tsadick, Hewlett Foundation
Lauren Ito, OpenIDEO
Michael Martelle, The National Security Archive
Mike Hsieh, Transformative Cyber Innovation Lab
Mike McNerny, Arbor Networks
Monica Ruiz, Hewlett Foundation
Ray Davidson, Michigan Cyber Civilian Corps / State of Michigan
Renee DiResta, Mozilla Fellow
Philip Reiner, Technology for Global Security
Scott Rosenberg, Axios
Stephanie Sizemore, OpenIDEO
Steve Weber, UC Berkeley
Susan Hennessey, Brookings + Lawfare

We hope that you enjoy learning more about this community of creators and their visions for reimagining the visual language of cybersecurity.

Thank you for your interest in this Challenge!

THE CYBERSECURITY VISUALS
CHALLENGE TEAM



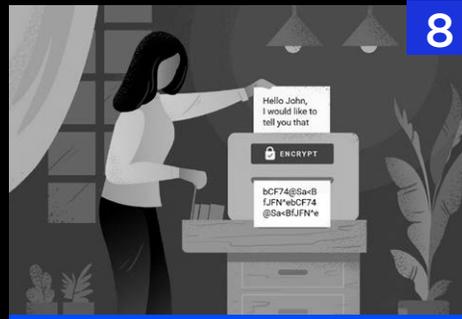
All shortlisted submissions are openly licensed under Creative Commons (CC BY 4.0), which means that while the creators retain copyright to their materials, they give others permission to distribute, remix, and build on the work, as long as the artist is credited for the original work.

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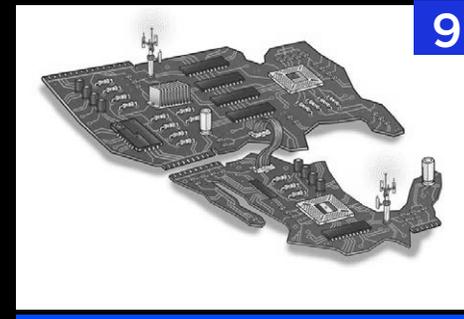
TOP IDEAS



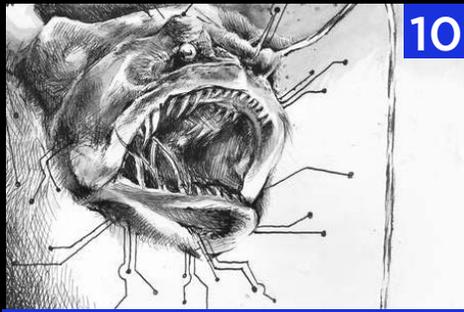
Abraham Joel Pena Puleo



Afsal CMK



Claudio Rousselon



Ivana Troselj



Mariah Jochai

CONTENTS FINALISTS



Abrahma Tansini



Alaina Nicol



Aswin Kumar Behera



Bronney Hui



Caroline Matthews



Conor Caplice



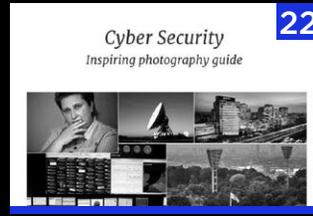
Elio Reichert



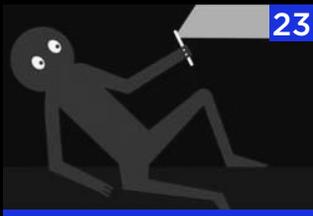
Ifrah Yousuf



Jason Kravitz



Jeroen de Bakker



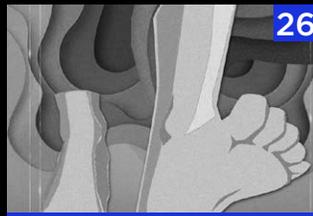
John Hurley



Khanh Tran



Linda Graf



Mai Arollado



Nathaniel Anderson



Rebecca Wang



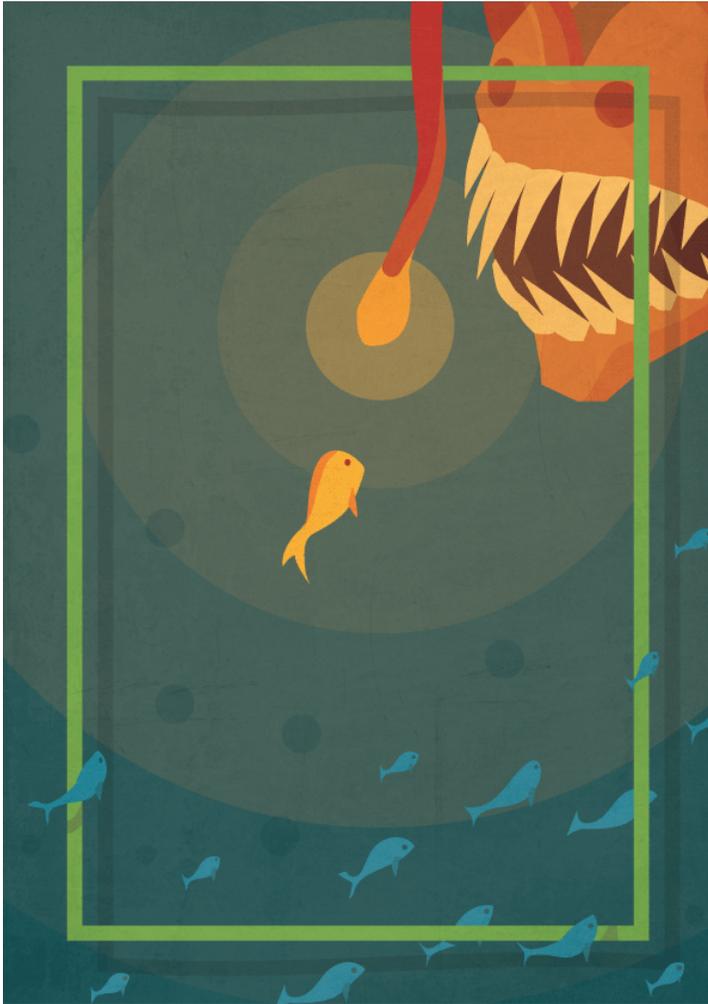
Thomas Grimer



Tiffany Baker

TOP 5 IDEAS

A blue background with a white topographic map pattern. The map features contour lines and is positioned behind the text, with parts of the map visible on the left and right sides of the page.



ABRAHAM JOEL PENA PULEO

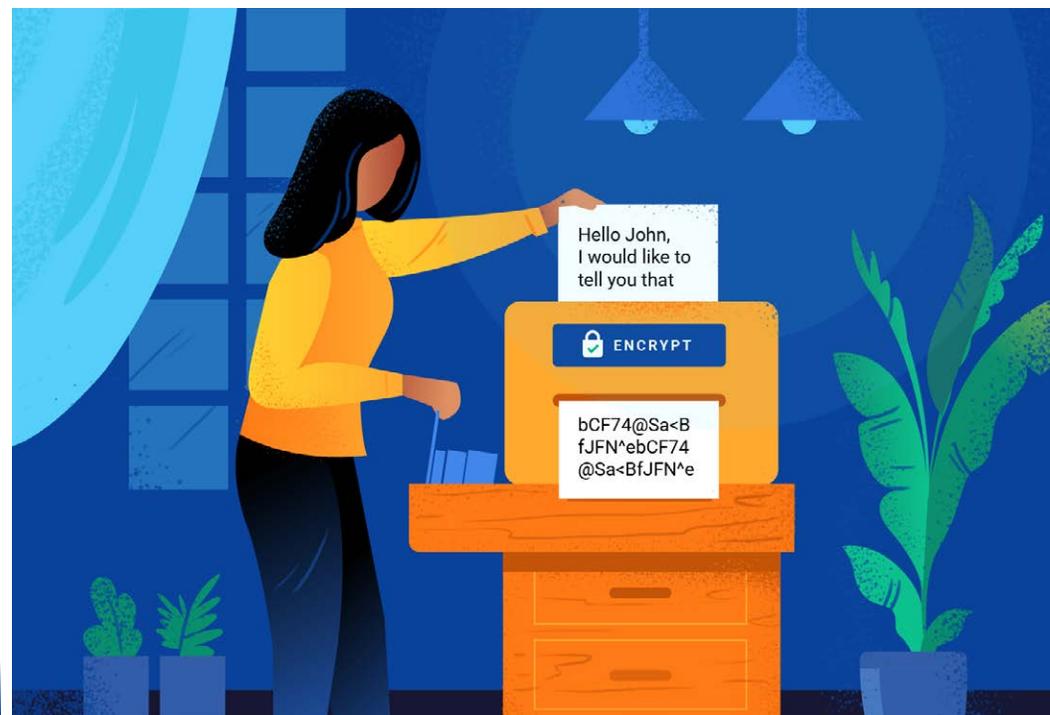
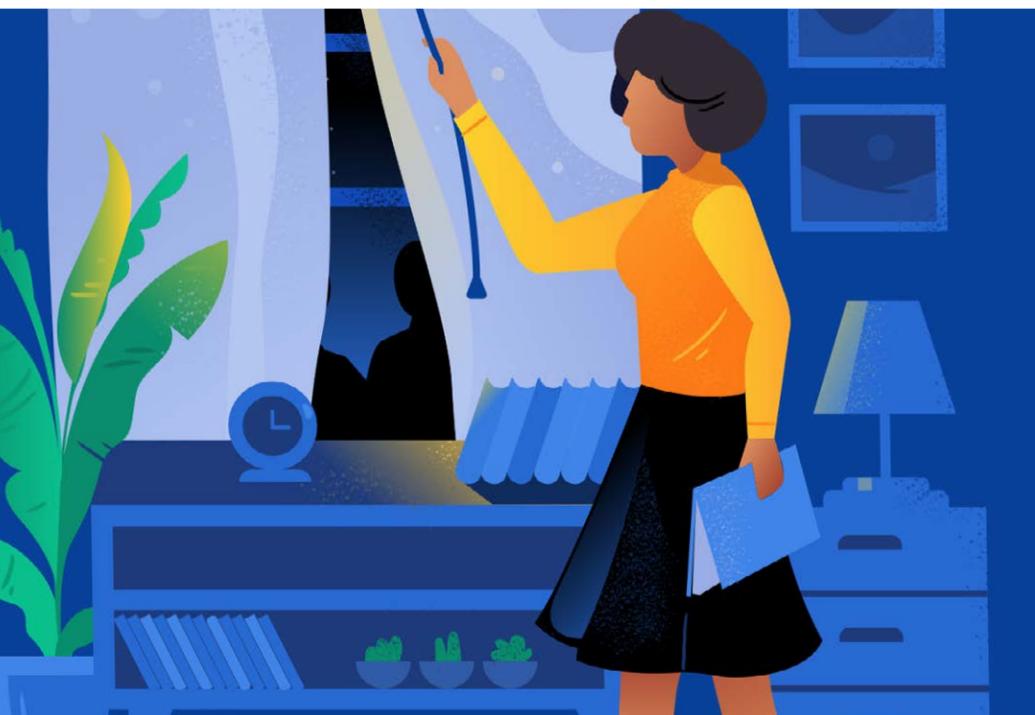
Web designer and brand strategist with more than 8 years of experience

✉ abraham@monttilva.com

UNITED STATES OF AMERICA

Studying the concepts of hacking and the reasons behind it, I realized that there are obvious similarities in the behaviors, abilities and characteristics of the predators and prey of the animal kingdom, with respect to their human counterparts, hackers and victims.

However, as in nature, we can evolve the handling of tools and the adoption of tools and behaviors to present better defenses against possible digital attacks.



AFSAL CMK

Artist; coder; enjoys turning complex problems into simple designs

<https://dribbble.com/afsalcreations>

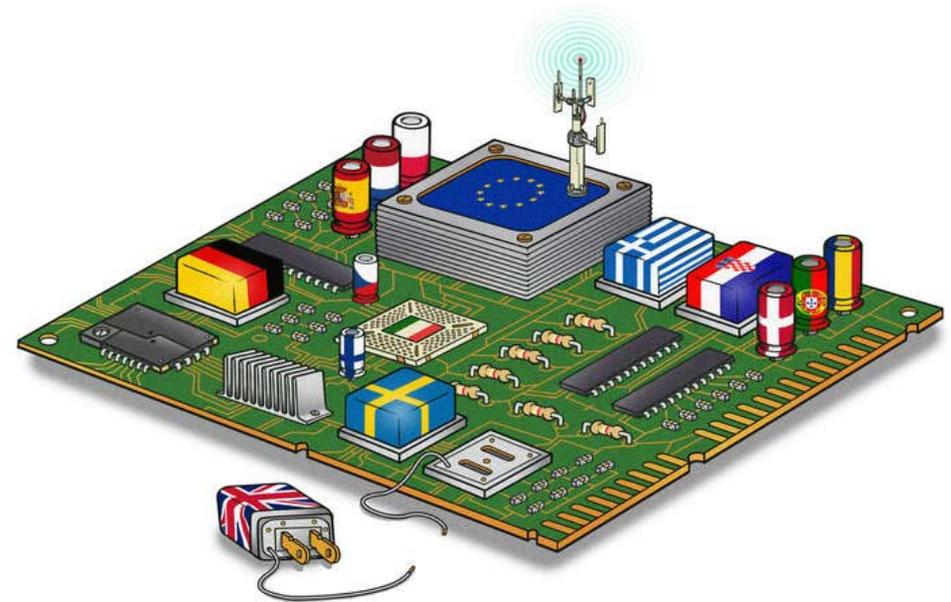
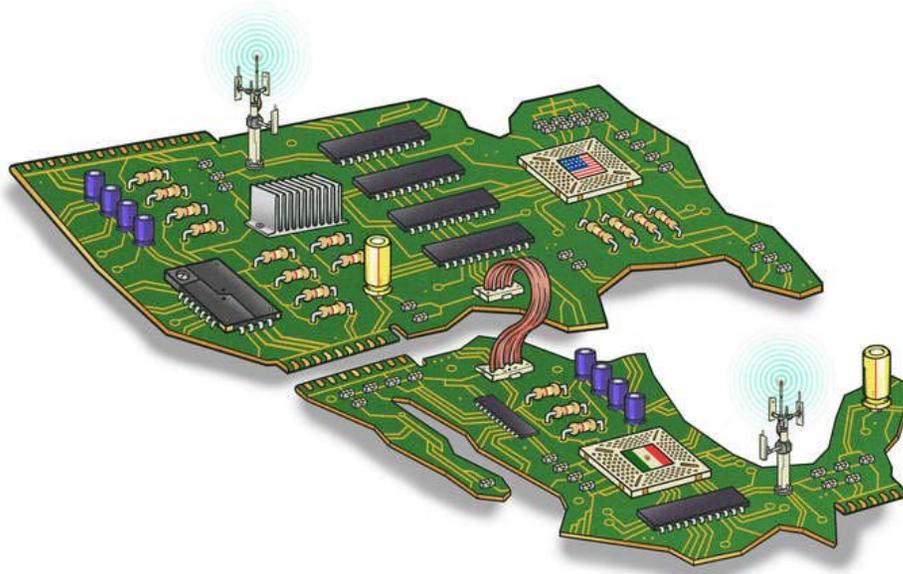
✉ afsalcreations@gmail.com

INDIA

The key vision for crafting these visuals was to communicate digital privacy and encryption by following design principles like humanizing the space, incorporating technical accuracy, and building more familiar metaphors that are easy to understand for an average person.

Also to make this field rich with diverse communities to make them feel like they're part of this. Each of these visuals communicates a specific topic for privacy and encryption. That helps to bring awareness about individual responsibility, and also gives a better understanding of digital security and privacy.

ARTIST'S STATEMENT



CLAUDIO ROUSSELON

Visual artist + muralist; interest in tech, sci-fi, aerospace + energy science

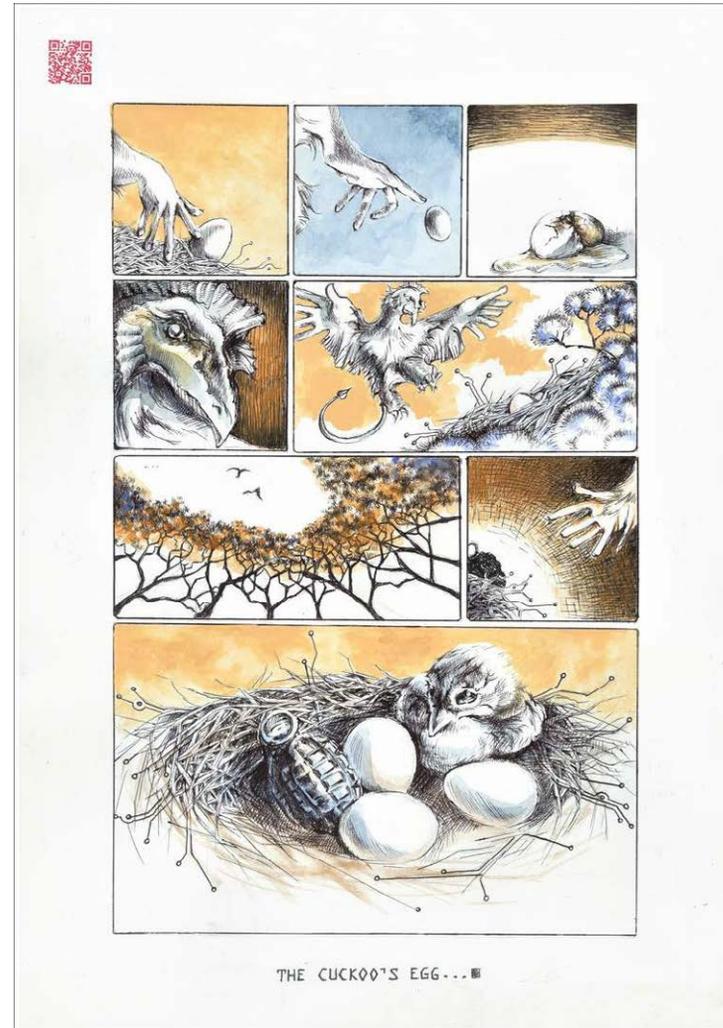
[instagram.com/badrattus](https://www.instagram.com/badrattus)

✉ claudio.rousseleon@gmail.com

MEXICO

A glimpse into the ever evolving digital world and the technology that is a part of our everyday life. The current situation on borders all around the globe is getting to a critical point of conflict.

Although there are no tangible political borders in cyberspace, we can still experience restrictions due to a country's policies on the use of the web or compatibility issues when it comes to technology/hardware.



IVANA TROSELJ

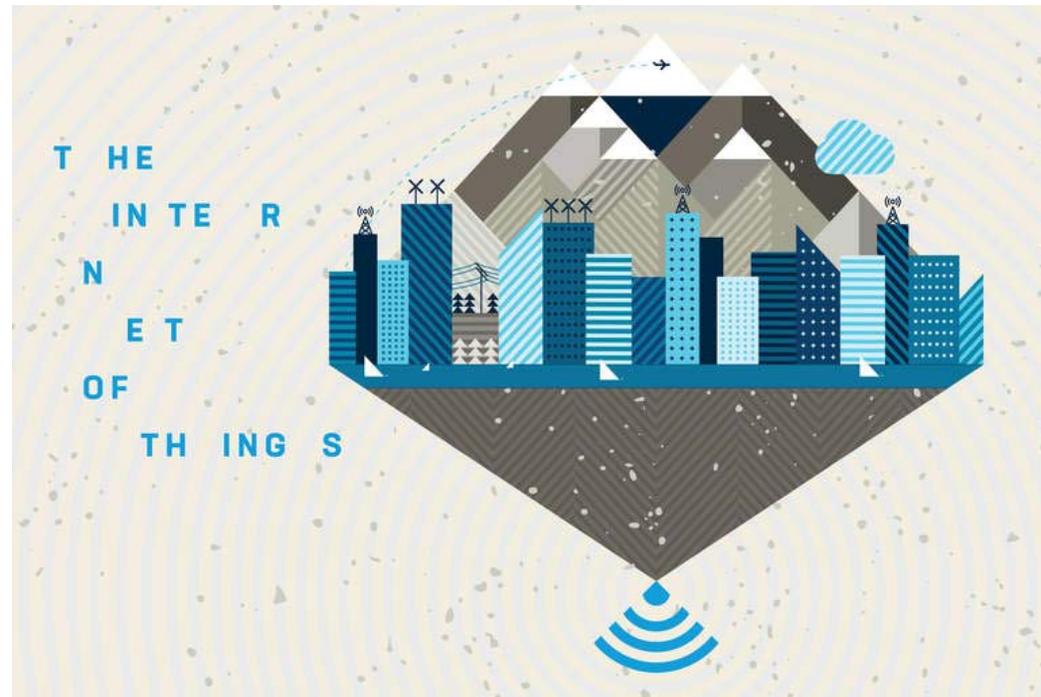
PhD student in cybersecurity; fine arts / illustration

✉ i.troselj@student.adfa.edu.au

AUSTRALIA

This is a concept of personal online security in the guise of a cautionary children's bedtime story. Strange beasts and supernatural elements collide with the everyday.

A vintage style of children's book illustration brings to life new threats, while reminding us that the story of trust is as old as time.



MARIAH JOCHAI

Art director; 10 years experience in fashion and tech

craftograph.com

UNITED STATES OF AMERICA

Before I began illustrating any one of the opportunity areas, I looked at them through the lens of the natural world. Using this metaphor makes the concepts more accessible to viewers across cultures, as nature is all around us.

My goal was to illustrate familiar ideas from nature that, when paired with headlines describing the complex concepts of cybersecurity, would spark intrigue and inspire viewers to read on or learn more about the topic.

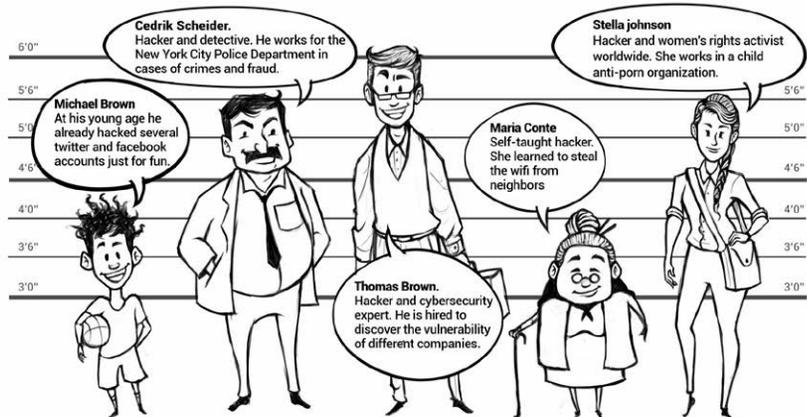


FINALISTS

Can you guess who the hacker is?



They are all hackers!



In the real world, hackers come in all shapes and sizes.

Popular culture tends to focus on hackers breaking into systems or stealing data, there's also a huge variety of interests and motivations at work in why and what hackers really do.



Protective guard of the Roman Empire.
(300 a.C.)



National security against cyber attack.
(2019 d.C.)



ABRAHMA TANSINI

Graphic designer and freelance digital illustrator

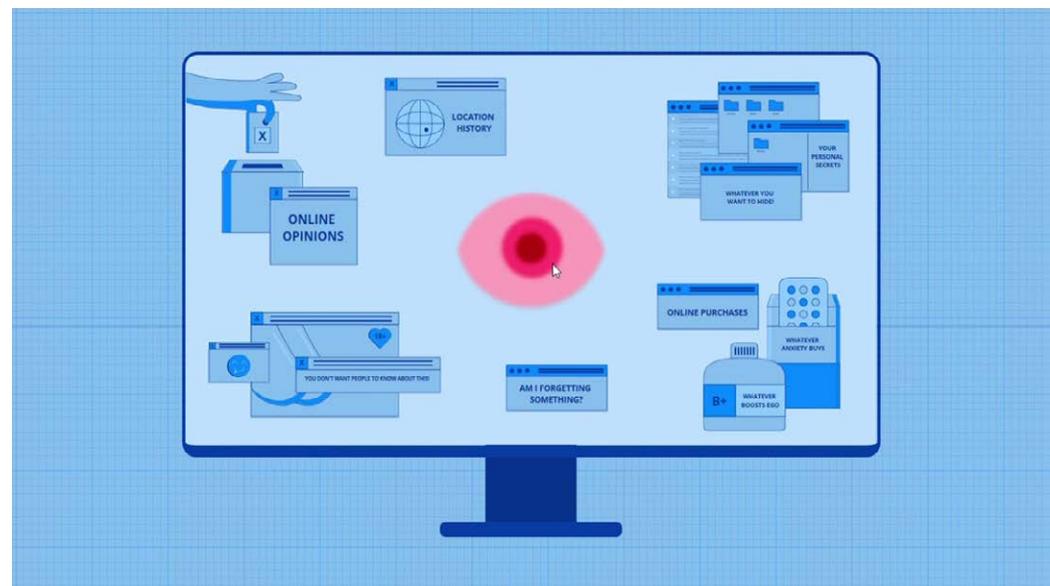
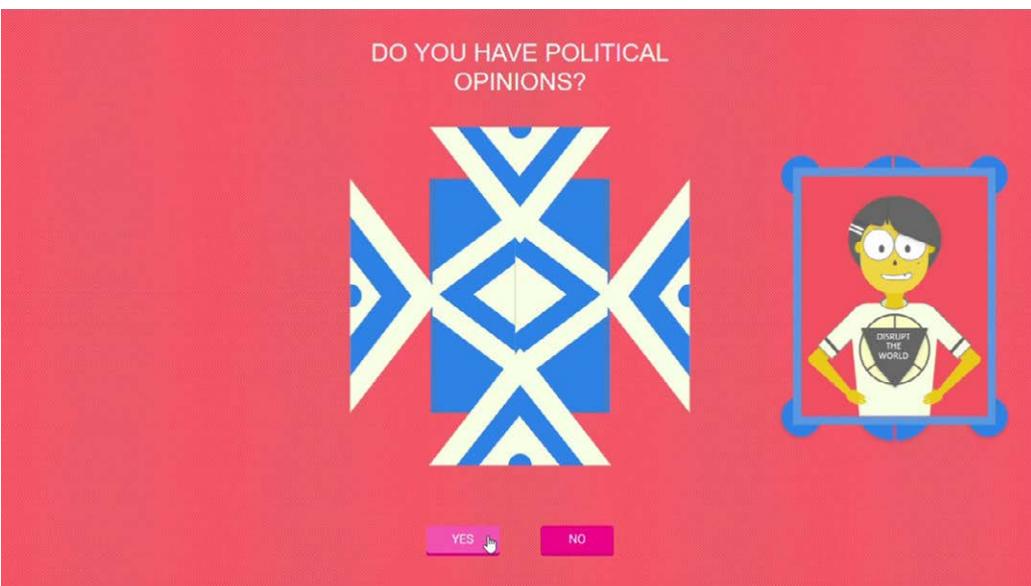
[behance.net/abrahmatan](https://www.behance.net/abrahmatan)

[✉ abrahmatan@hotmail.com](mailto:abrahmatan@hotmail.com)

SPAIN

As a graphic designer I used comic and humor as a tool to explain complex concepts of cybersecurity to everybody. The topic of security and cybersecurity is a human need. This series of illustrations can be used in newspapers and magazines. They contain a very simple language (black and white illustrations)

that are intended to be understandable to any audience. In my illustrations I have tried to expose that the issue of privacy information and cybersecurity is a theme of humanity, of our instincts to protect ourselves and ensure a better future for ours. Who has the information has greater control and power of decision.



ASWIN KUMAR BEHERA

Mechanical engineer with interest in visual design and experience modeling

codepen.io/aswinbehera

✉ aswinkumarbehera@gmail.com

INDIA

The web is an evolving and ever-growing medium that connects every one of us. I have made a minuscule attempt to capture this dynamic nature. The portfolio represents visualization of five concepts, arranged in increasing order of difficulty to visualize. We start with the things, everyone is familiar with and discuss on a regular basis and go on to

unravel the intricacies of the system that is increasingly influencing the foundation of our society. Data valuation, data collection and creation of personality models and its respective use in disinformation campaigns are some of the things I have attempted to explain in the portfolio. Final portfolio includes animations.



BRONNEY HUI

Professional photographer and graphic designer for nearly 20 years

bronney.com

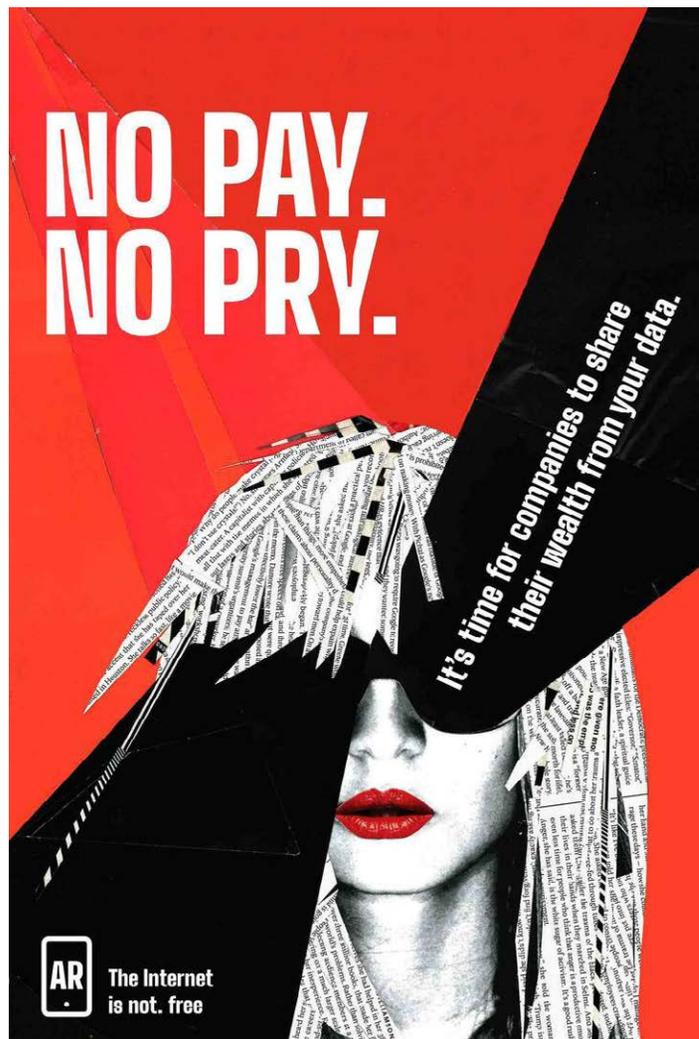
✉ bronney@gmail.com

CANADA

In the era of social media everyone is sharing everything. Sometimes even sharing it on live streams where there's no edit or content gateway. Although we all try our best to filter what we share, it's inevitable that we will sometimes share things that we regret later.

Companies who host these platforms are constantly under scrutiny but I think the users have to be educated and take responsibility too.

ARTIST'S STATEMENT



CAROLINE MATTHEWS

Digital designer with eight years of agency and media experience

caromatt.squarespace.com

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UNITED STATES OF AMERICA

Both informative and alarming, the PSA “The Internet is not. free” calls users to grapple with their digital shadow. The target audience are those that are the most vulnerable to abusive data surveillance: those that grew up sharing online as digital natives.

The proper place for a trojan isn't on a computer.



Learn more at www.Unhackable.Club

Are you using a cover?
Stay safe.



Learn more at www.Unhackable.Club



CONOR CAPLICE

Content manager with background in writing; self-taught coder

conorcaplice.com

✉ conor.caplice@gmail.com

UNITED STATES OF AMERICA

My final portfolio is a fantastic concept trapped behind the limited graphic design skills of a man who only has GIMP to work with. It's funny, clever, and dare I say it - sexy. It is also, unfortunately, held back by its creators lack of design skills and aesthetic abilities. Thus, my portfolio is best graded on a curve (kidding!)

(maybe?). My aim is simply to link the concepts of sexuality and cybersecurity in people's minds to make the process of learning about cybersecurity more enjoyable because let's face it, its really not that enjoyable for the average person, while also demonstrating the importance of good cybersecurity practices.



ELIO REICHERT

Graphic designer with experience in digital media and interest in informatics

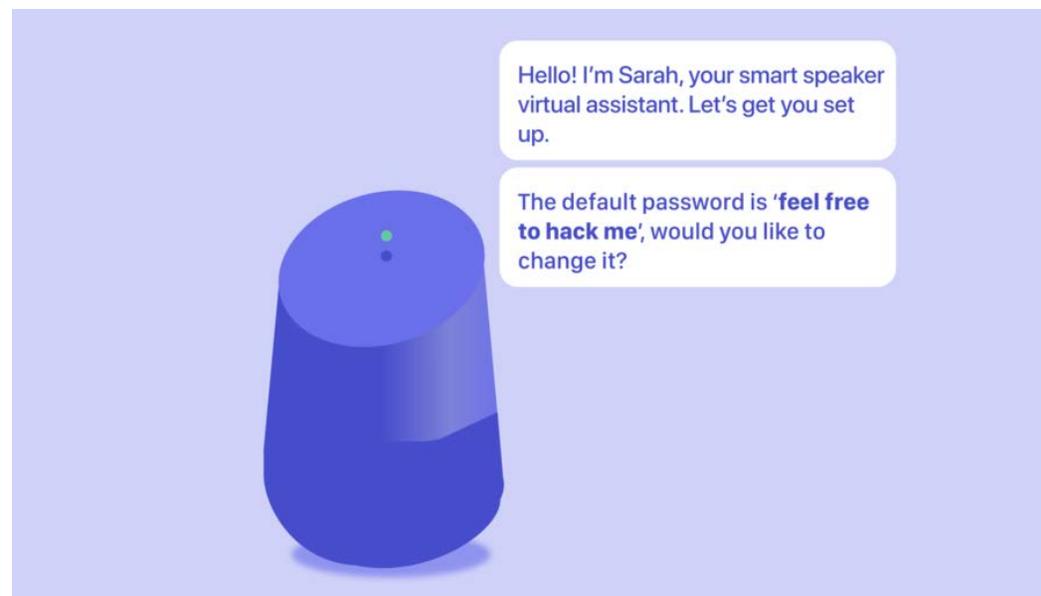
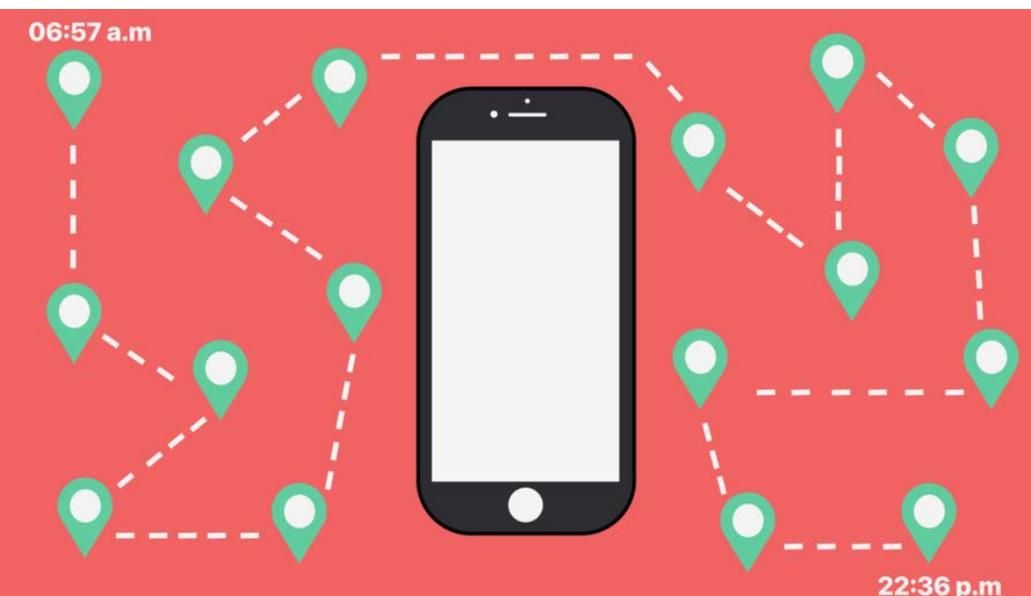
elioreichert.de

[✉ elio.reichert@icloud.com](mailto:elio.reichert@icloud.com)

GERMANY

My final portfolio visualizes the danger of phishing and shows a cybersecurity awareness game in action. It clears up that not every password manager is safe and should be blindly trusted.

Also, the illustration of a dam gives a feeling what it is about to take control of your personal data stream to make your own cyber world a safe environment.



IFRAH YOUSUF

Graduate student; UX designer
passionate about inclusive design

ifrahousuf.com

✉ yousuf.ifrah@gmail.com

CANADA

My final portfolio can be summarized by the phrase 'As Not Seen on TV.' Television and media constantly perpetuate stereotypes about cybersecurity that are misinformed and harmful. As a result, the average person does not know much about cybersecurity.

I wanted these images not only be understood by cybersecurity professionals, but also the average person with no knowledge/experience in cybersecurity (like I was before this Challenge).



JASON KRAVITZ

Worked in cybersecurity ~20 yrs; data visualization; photography

jason.aminus3.com

✉ jkravitz@gmail.com

UNITED STATES OF AMERICA

Malicious hackers are not always the people you might expect. In the physical world it is much more obvious what is risky and what is safe. In the digital world it is often not as clear. As our technology gets "smarter" and more connected, it can become more vulnerable to being accessed or abused for malicious use.

These creations are a lighthearted look into how each of us are personally impacted by cybercrime, where and how we are most at risk, and who is actively seeking to exploit our digital life. Included with submission: myothercomputer.com/openideo

Cyber in your veins

life depending systems connected to the internet



Privacy checks



Obvious links to cyber security domain



Light / Atmosphere setting

The surgical robot

This is a surgical robot in the Erasmus Medical Centre in Rotterdam. The robot minimizes the size of the wound and specialists can operate the robot from anywhere around the world if needed, not having to fly over a surgeon for a specialistic job.

The advantages are obvious but it demonstrates as well the importance of sound digital security as we move towards a society where even these kind of life-depending systems are online.

Cyber Security

Inspiring photography guide



Too often the powerful tool of photography is overlooked in communication about cyber security.

The amount of data on the Internet is constantly increasing. Not only our personal data stored online but our physical world also connected to the Internet; essential parts of our lives - such as the height of the water level, the flow of drinking water, the flow of electricity, the way our trains ride upon, and even our money - are all mediated via the Internet.

In Google "cyber security" images of hackers in dark rooms and glowing green binary code appear. Sadly, the eyes of our outlets also use this kind of imagery. The combination of the background in combination with the imagery in the foreground make it a very abstract subject for the general public.

One of the challenges in understanding a subject is to feel some connection to it, and that is very hard with binary code (a complex illustration). That is part of the reason why people fail to see this subject as the heart of modern life.

Photography is a very powerful tool in the battle for cyber security more comprehensible and less abstract to the general public. Showing actual places, and situations where people can relate to can make a big difference.

In this inspiring photography guide for photographers and journalists showing it is possible to photograph cyber security for this subject and work towards a better understanding of this vital topic.

In 2016 I started realising the photographs and imagery about cyber security shown in the media are not doing justice to the subject, and most of all not contributing to understanding the field of cyber security. That's when I started my Cyber Security photography project which is the foundation for this cyber security photography guide.

Jeroen de Bakker, documentary photographer



JEROEN DE BAKKER

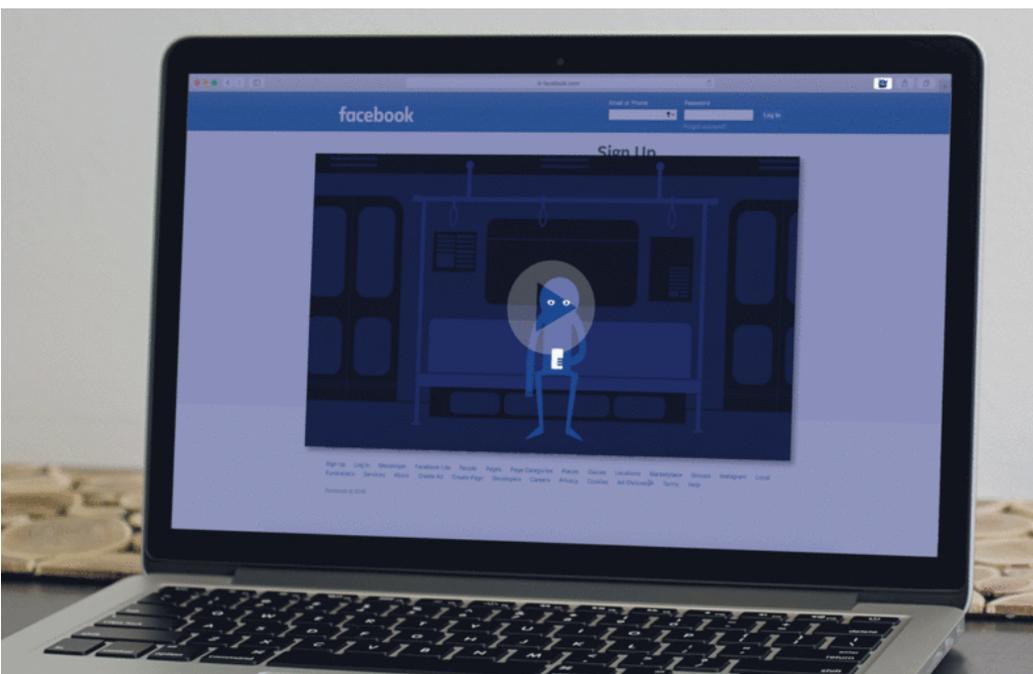
Documentary photographer; runs a cybersecurity photography project

jdebakker.com

✉ jeroen@jdebakker.com

NETHERLANDS

An inspiring photography guide for photographers, journalists and media makers. Showing it is possible to photograph imagery for this subject that avoids stereotypes, uses real world images and does justice to the subject.



JOHN HURLEY

UI/UX + visual design; multi-disciplinary collaboration; musician

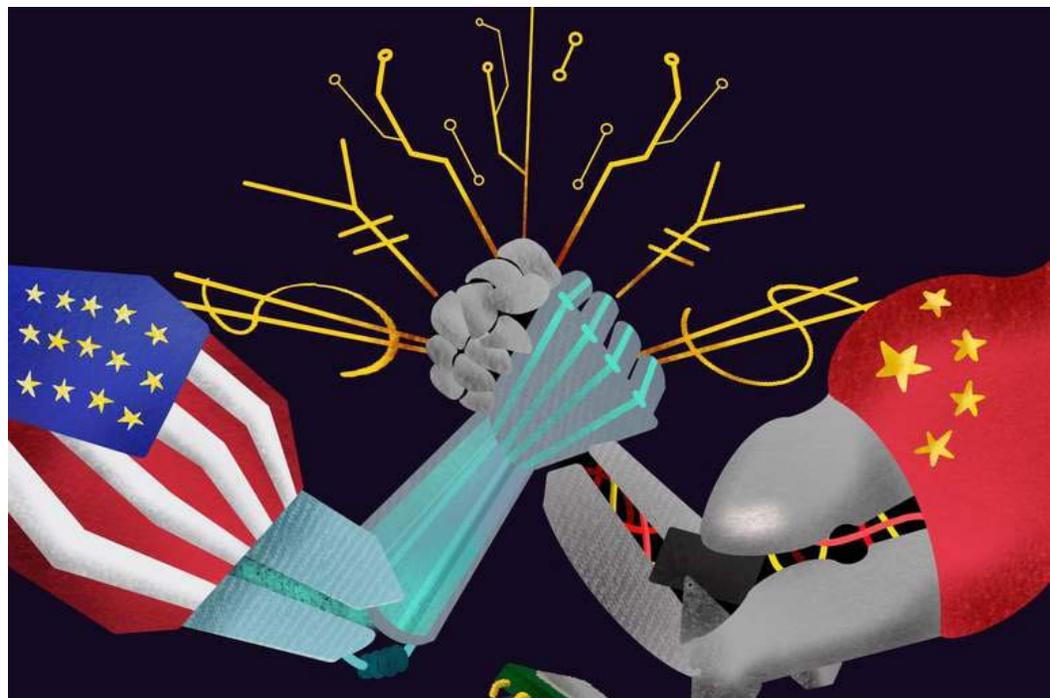
johnhurleydesign.com

✉ john.hurley@cantina.co

UNITED STATES OF AMERICA

Our submission is a storyboard for an animated short about surveillance. The story follows a user who might be signing up for a new app/service or posting on an existing service and is prompted with a sequence of permission requests. The user blindly agrees to share the requested information, a habit that's become far too common.

As the frequency of data breaches and coordinated cyber attacks continues to increase, this automatic behavior must be brought into question. As more services and organizations suffer breaches, the data points can be cross referenced to build a more complete picture of you. Final portfolio includes an animation.



KHANH TRAN

Aspiring UX designer with comic-drawing hobby; ex-Google

khtran.com

UNITED STATES OF AMERICA

ARTIST'S STATEMENT

My portfolio shows the different conversations about:

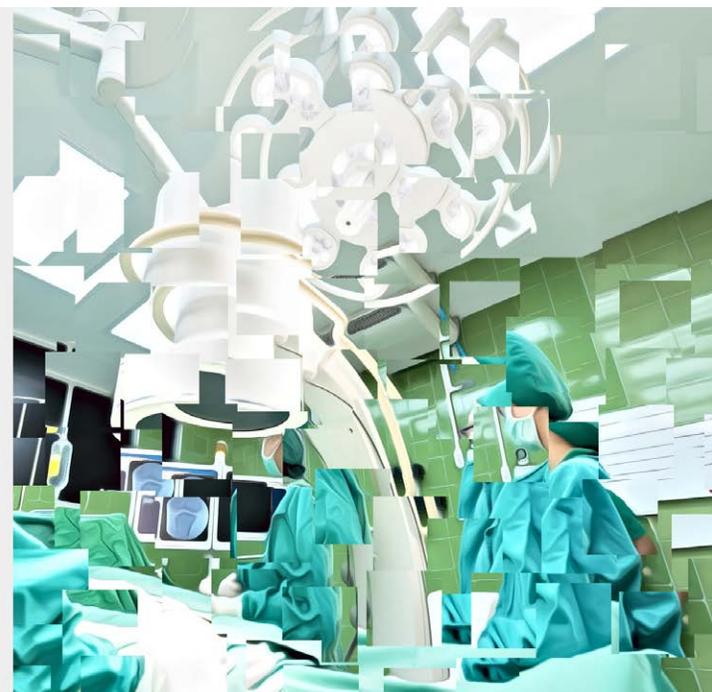
- (1) Unknown of New Technologies,
- (2) Arms Race between the United States and China,
- (3) Smart Cities
- (4) Digital Privacy in Social Media and
- (5) Cybersecurity Specialists.

While these issues are diverse, I felt most compelled with (5) cybersecurity specialists since they are rarely portrayed in media. I used a lot of analogy from history and real-life games to help the general public grasp ideas quickly and easily. I am aware that using binary numbers is not encouraged but, for the sake of the message, I included them in a few visuals.



CYBER CONFLICTS

CAN DAMAGE THE
INTEGRITY OF
OUR MEDICAL CARE



LINDA GRAF

Freelance graphic designer; excited
about intersection of tech and design

✉ linda-graf@gmx.net

GERMANY

With this sketch I would like to illustrate how a cyber conflict can damage or stop the energy supply of a country by an attack. I want to portray the attack with a kind of lasso that contains binary code.

This way, I want to visualize the malicious code, regardless of a specific programming language. In the next step I will work out the graphics of the sketch with Illustrator and Photoshop.



MAI AROLLADO

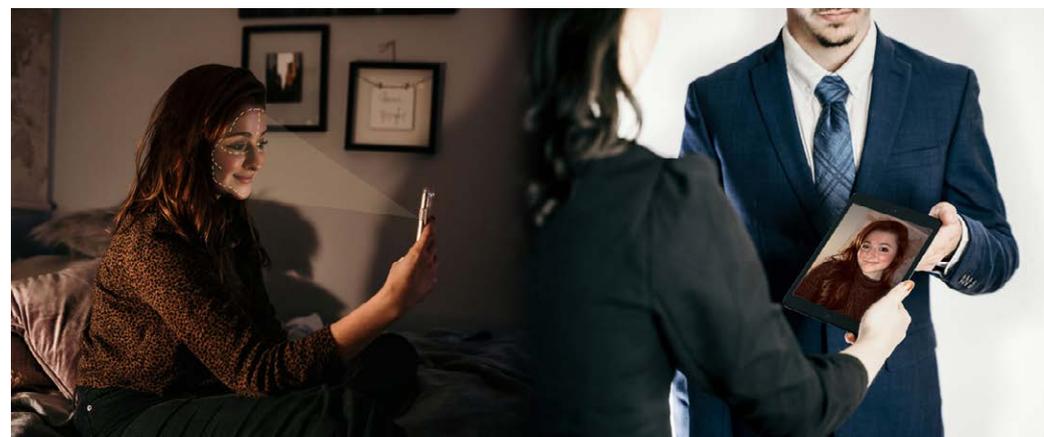
Industrial designer + artist; believes design can save humanity

[linkedin.com/in/mai-arollado-0b974951](https://www.linkedin.com/in/mai-arollado-0b974951)

✉ mai.arollado@live.com

CHINA

I have decided to narrow down my focus. This artwork depicts malware in a form of landmine on a cyber realm. Imagine yourself walking barefoot with out any caution and protection on where you step or click next in a cyber world might be detrimental to you.



NATHANIEL ANDERSON

Website designer; animator;
photographer

vessul.co

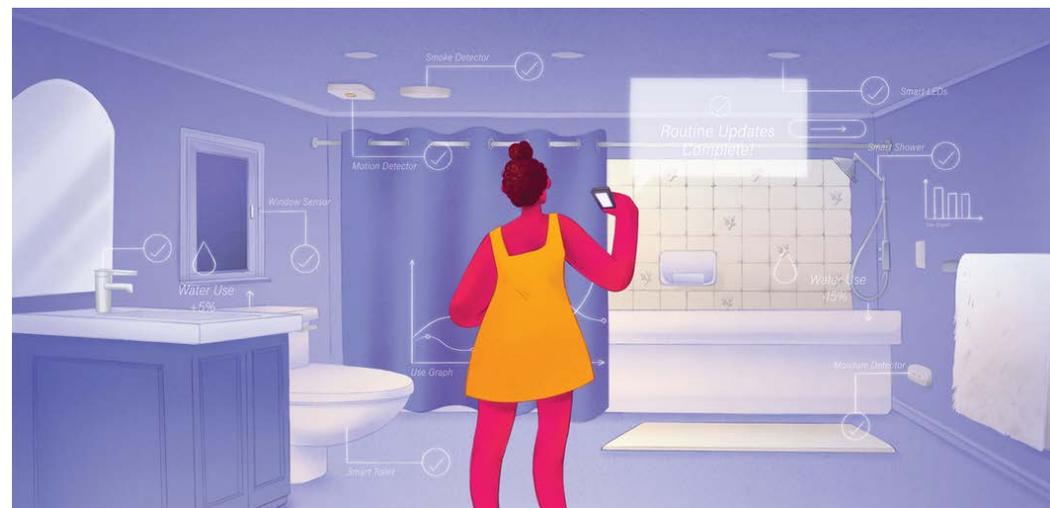
✉ nathan@nathanworking.com

UNITED STATES OF AMERICA

Looking in the wrong direction. It's easy to get caught up in social media and what is trending and not look at what is really being done with your data and how easy it can be to obtain it. The coffee shop photos are showcasing how visible some data is on open wifi networks. It's a little less about someone directly opening your computer like they have access and

more like you're showing they world all your data. The data brokers images are a way to showcase how typical these data brokers really are and how personal your data can be that is sold without you even knowing about it. Data brokers aren't guys in hoodies in the basement, they're big companies. Final portfolio includes animated GIFs.

ARTIST'S STATEMENT



REBECCA WANG

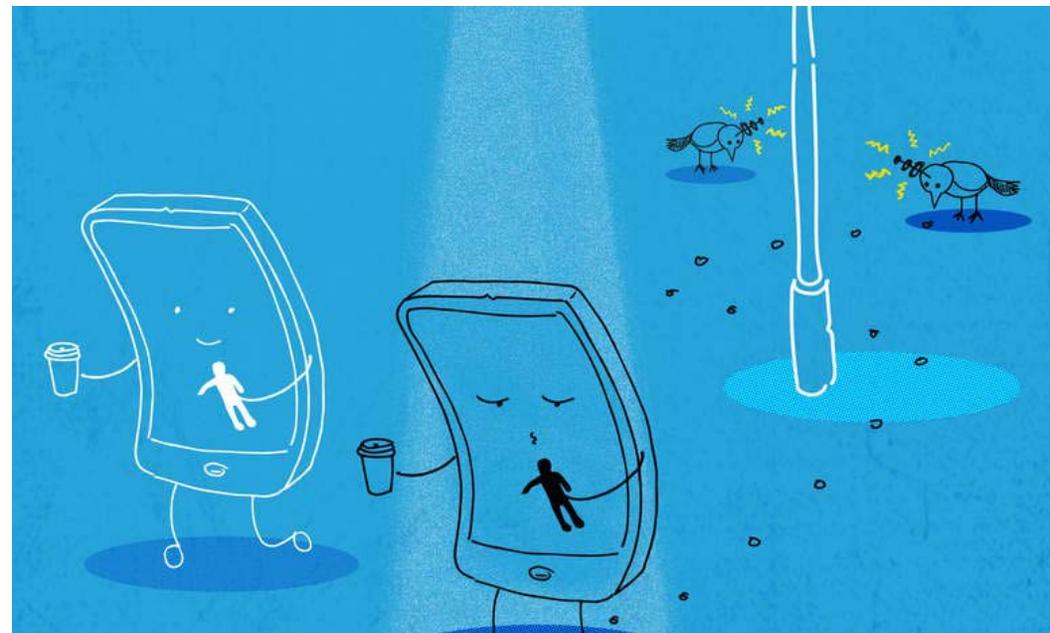
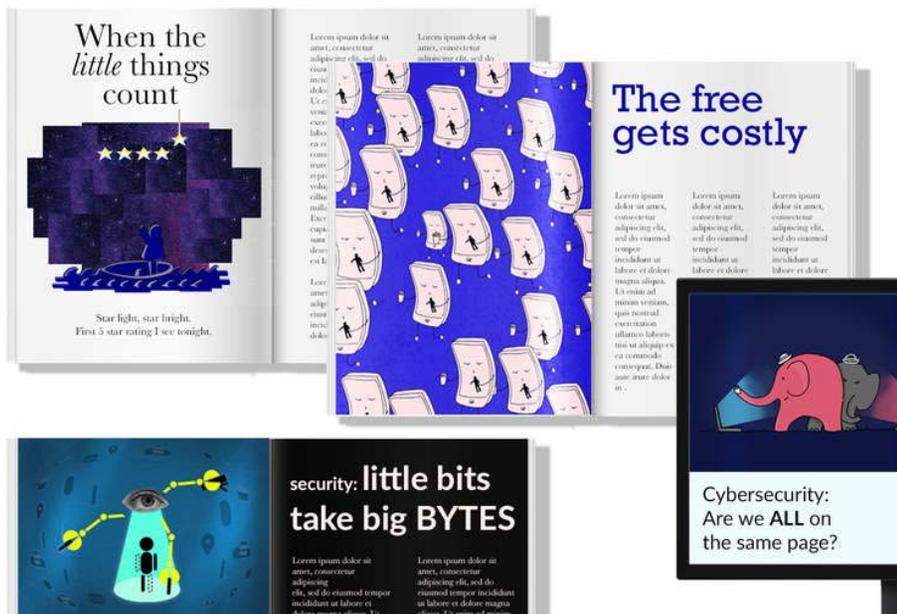
Student in product design; former graphic designer

✉ rebeccawang5@cmail.carleton.ca

CANADA

My original concept was to emphasize the less threatening side of personal cybersecurity and how it relates to IoT devices. I have expanded upon this idea in my final submission, which includes illustrations depicting simple ways people can better improve their cybersecurity with smart devices. I've drawn people in environments you normally don't think of

as part of a "smart home" - a nursery and a bathroom. These are both sensitive places, which I chose to give context to what having an IoT home means, and motivate people to protect themselves. The characters are doing basic things to protect themselves in a relaxed way, showing that security isn't difficult or overwhelming.



THOMAS GRIMER

Freelance creative; focus on new product + service concept generation

[linkedin.com/in/thomasgrimer](https://www.linkedin.com/in/thomasgrimer)

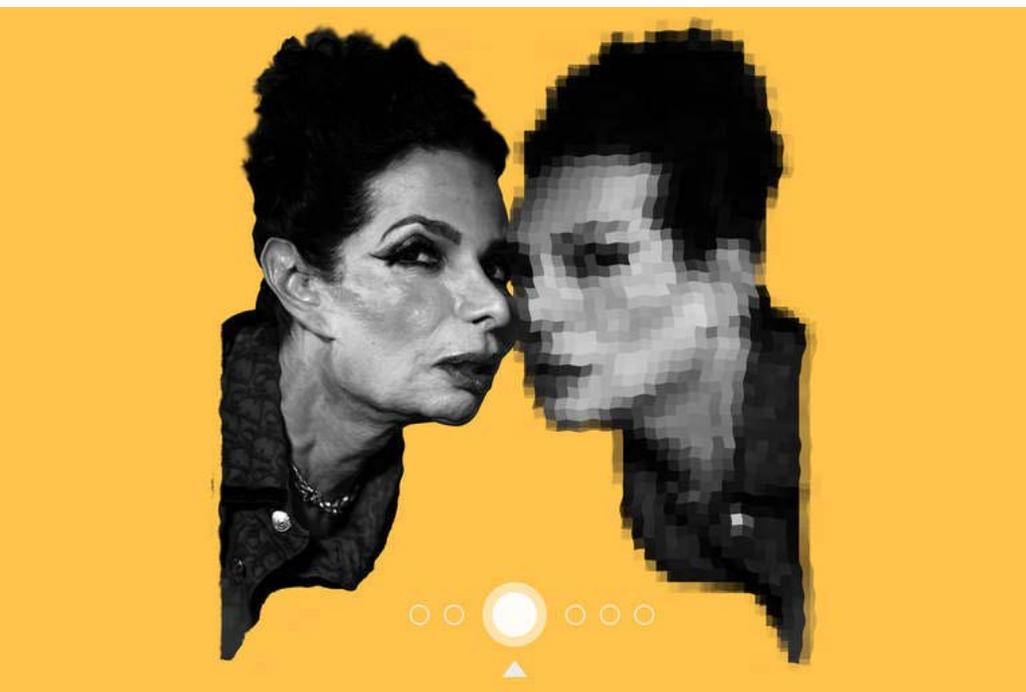
[✉ thomasgrimer@gmail.com](mailto:thomasgrimer@gmail.com)

UNITED KINGDOM

The images are not intended to stand alone - but to convey ideas or feelings that authors may apply for their own purposes and provide greater meaning via their given context. These are visual tools for others to use. Where possible I have either attempted to simplify a complicated technique (see encryption)

or have provided a wider concept and feeling without dictating i.e. a specific adversary. Where it has been necessary to depict a bad player/ character I have tried to use human features or a character with no personality and in order to prevent loading it with any initial bias.

ARTIST'S STATEMENT



TIFFANY BAKER

Photo-illustrator for CNN; painter;
digital collage artist

tiffany-baker.com

✉ tiffanyideo@gmail.com

UNITED STATES OF AMERICA

My final portfolio deals with the subject of digital identity illustrated through five unique vignettes. The likeness of each subject is copied, distorted, or made ambiguous in some way.

Using a variety of different subjects, I am making a commentary about how ubiquitous biometric verification is in our lives and how it touches a wide audience.

ARTIST'S STATEMENT

