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 McNerney, 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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Abraham Joel Pena Puleo

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TOP IDEAS
ABRAHAM JOEL PENA PULEO
Web designer and brand strategist with more than 8 years of experience
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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
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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.
CLAUDIO ROUSSELON
Visual artist + muralist; interest in tech, sci-fi, aerospace + energy science
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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
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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.
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
ABRAHMA TANSINI
Graphic designer and freelance digital illustrator
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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.
ALAINA NICOL
Strategic designer; web developer; artist; founder of a digital studio
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UNITED STATES OF AMERICA

Webb Shell is a visual, somewhat literal, discovery of the concept of what a web shell is. I approached this Challenge without previous knowledge of this cyber threat so I based the intention of this story under the same premise - to educate the general public in few words, or visuals in this instance.

Image one is meant to describe what a web shell is. His demeanor is consistent with our generalized perception a hacker; secretive, capable, confident, and mischievous, always working quickly and efficiently towards his goal. Image two shows how the web shell infiltrates. He successfully installs himself into a device through a vulnerable portal and enables control. Image three depicts what happens.
ASWIN KUMAR BEHERA
Mechanical engineer with interest in visual design and experience modeling
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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
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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.
CAROLINE MATTHEWS
Digital designer with eight years of agency and media experience
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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.

CONOR CAPLICE
Content manager with background in writing; self-taught coder
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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, it’s really not that enjoyable for the average person, while also demonstrating the importance of good cybersecurity practices.

Are you using a cover?
Stay safe.
ELIO REICHERT
Graphic designer with experience in digital media and interest in informatics
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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  
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passionate about inclusive design  
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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).
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

JASON KRAVITZ
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UNITED STATES OF AMERICA
**Cyber in your veins**
life depending systems connected to the internet

Cyber Security
Inspiring photography guide

JEROEN DE BAKKER
Documentary photographer; runs a cybersecurity photography project
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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.

The surgical robot

This is a surgical robot in the Erasme 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 specialist 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.

Privacy checks

Obvious links to cyber security domain

Light / Atmosphere setting

Application

Too often the powerful tool of photography is overlooked in munication about i security.

Our internet is constantly increasing. Not only our personal data stored online but our physical life connected to the internet. Essential parts of our lives, such as the height of the water level, the light taking water, the flow of electricity, the car traffic, the traffic, and even our money, are all in the internet.

So people “cyber security” images of hackers in a hoodie and glowing green binary code generator. Sadly, the two sides also use this kind of imagery. This background in combination with the imagery in mainstream media is every attennt subject for the general public.

In understanding a subject is to love some of its variations, and that makes very little sense in a complete illustration. That is part of the reason why I use this subject is the heart of modern technology.

Why is every power failure a threat to the safety of i security more comprehensible to and felt by the general public? Throwing several stories, but variations where people can relate in their daily lives.

In inspiring photographers to do for photographers this shows it is possible to take a photograph for the subject and work towards a better understanding of this vital topic.
JOHN HURLEY
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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
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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.
LINDA GRAF
Freelance graphic designer; excited about intersection of tech and design
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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.

CYBER CONFLICTS
CAN DAMAGE THE INTEGRITY OF OUR MEDICAL CARE
MAI AROLLADO  
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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.
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 want 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.

NATHANIEL ANDERSON
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UNITED STATES OF AMERICA
REBECCA WANG
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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.
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.
TIFFANY BAKER  
Photo-illustrator for CNN; painter; digital collage artist  
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UNITED STATES OF AMERICA

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.

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.