



# GENCYBER2021: CYBER(SECURITY) ETHICS

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July 16, 2021



# OBJECTIVES

To learn about cybersecurity ethics

To learn about our responsibilities in the digital world

# AGENDA

## Introduction

**What are cybersecurity ethics?**

**Ten commandments of cyber ethics**

**Cybersecurity ethics agreement**

**What does it mean to be a good digital citizen?**

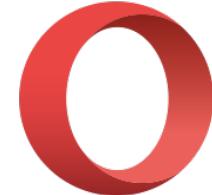
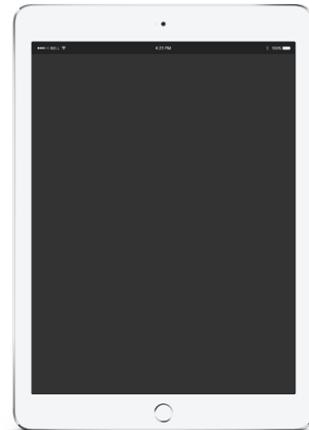
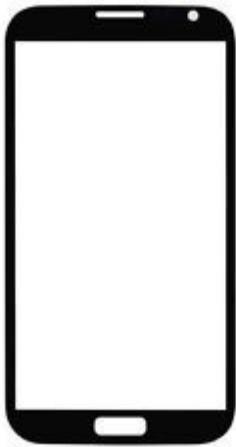
**Take-away message and closing**

# VOCABULARY

- Cyber(security) ethics = computer ethics
- Digital footprint
- (Good) Digital citizen



# IN OUR EVERYDAY LIFE



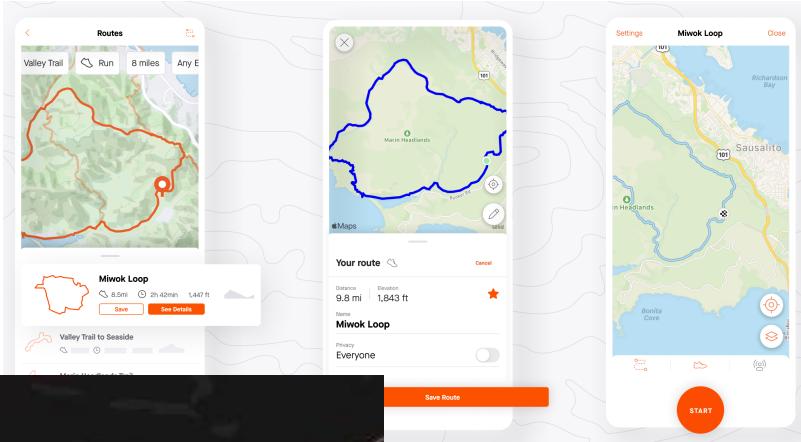
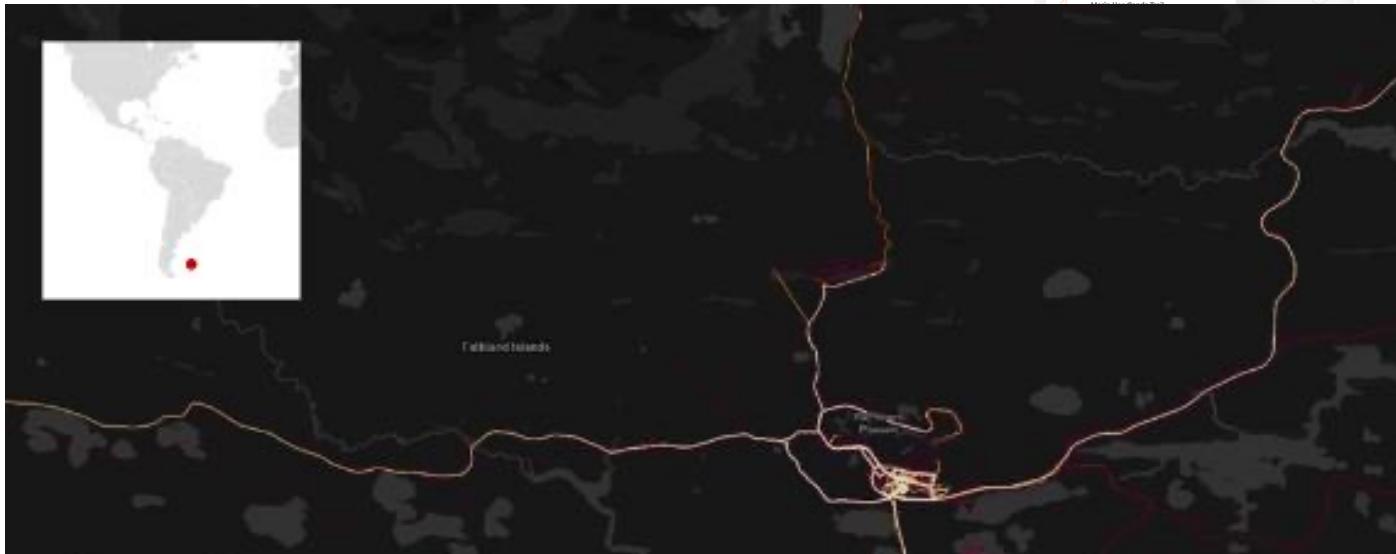
# STORY

"Twenty-year-old college student Nathan Ruser has an interest in the Syrian conflict and an affinity for maps. It's this combination that led him to discover the potential security risks posed by fitness app Strava. On Saturday, the Australian came across a tweet of Strava's global heatmap, which was originally published in November 2017. Ruser noticed lit up in areas in regions of Syria and the Sahara, often not occupied by civilians, that indicated the presence of security forces working out near military bases and other sensitive locations.

His findings went viral over the weekend, exposing remote areas and conflict zones where military personnel and government officials are seemingly present. This sensitive information could be used to track the running routes and identify locations where personnel are deployed."

Source: [money.cnn.com/2018/01/29/technology/strava-nathan-ruser/index.html](http://money.cnn.com/2018/01/29/technology/strava-nathan-ruser/index.html)

# A STRAVA HEATMAP SHOWING THE FALKLAND ISLANDS AND RAF MOUNT PLEASANT.



# Lack of ethics education for computer programmers shocks expert

MADISON REIDY

Last updated 05:00, July 2 2017



123RF.COM

Society is becoming more dependent on the creations of computer coders but New Zealand's future technology masterminds are barely taught to think about ethics.

# The Internet of Things Needs a Code of Ethics

Technology is evolving faster than the legal and moral frameworks needed to manage it.

KAVEH WADDELL

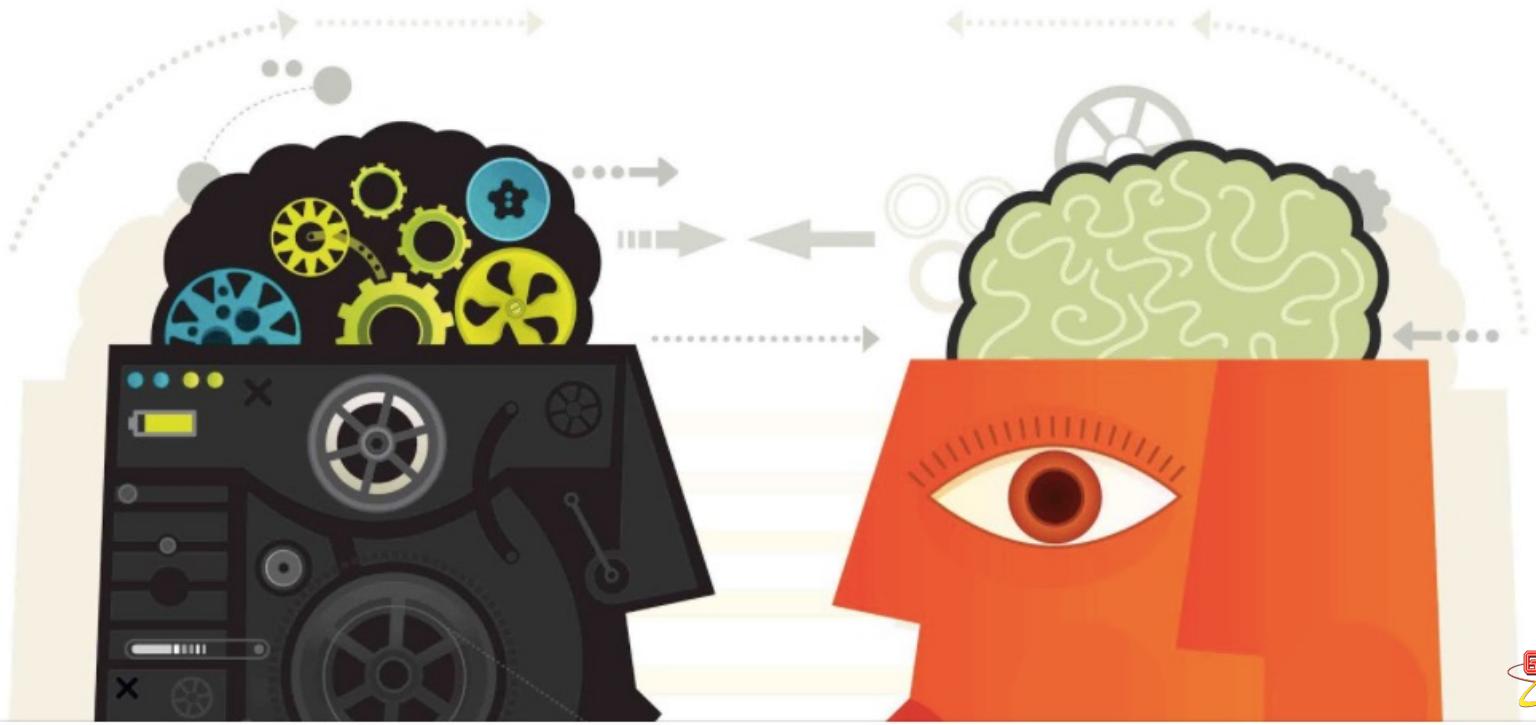
| MAY 1, 2017

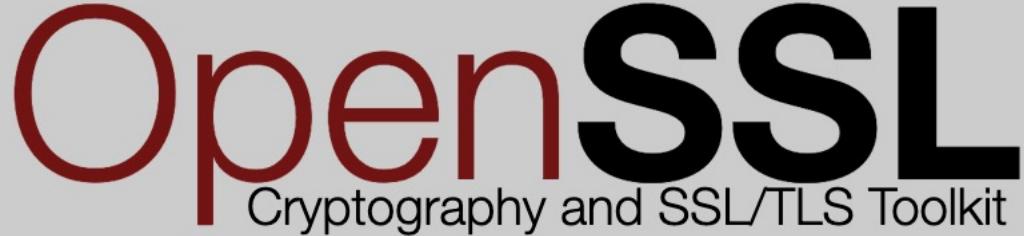
| TECHNOLOGY



Connected devices have proliferated faster than legal and ethical frameworks can keep up.

# Python Meets Plato: Why Stanford Should Require Computer Science Students to Study Ethics





## Legalities

Please remember that export/import and/or use of strong cryptography software, providing cryptography hooks, or even just communicating technical details about cryptography software is illegal in some parts of the world. So when you import this package to your country, redistribute it from there or even just email technical suggestions or even source patches to the authors or other people you are strongly advised to pay close attention to any laws or regulations which apply to you. The authors of OpenSSL are not liable for any violations you make here. So be careful, it is your responsibility.

# Welcome HackThis!! user

HackThis!! has been re-branded and is now called Defend the Web. Under the surface nothing has changed, this site is still run by the same great team and offers the same range of challenges and articles.

Already have a HackThis!! account? [Click here](#) to login with the same details to get access to all your old content.

# Defend the Web

An Interactive Cyber Security Platform

[ Get started ]

Login | Signup

Let's protect the web together

Defend the Web is an interactive security platform where you can learn and challenge your skills. Try and complete all of our 60+ hacking levels. Learn from our series of articles covering

# ETHICAL HACKING/HACKERS

## Types of hackers



**BLACK HAT**  
Malicious  
hacker



**WHITE HAT**  
Ethical hacker



**GREY HAT**  
Not malicious,  
but not always  
ethical



**GREEN HAT**  
New, unskilled  
hacker



**BLUE HAT**  
Vengeful hacker



**RED HAT**  
Vigilante hacker



# TOOLBOX & ETHICAL SIXTH SENSE

# CYBER(SECURITY) ETHICS



Ethical behavior and thinking in the field of cybersecurity

# JAMBOARD: SOCIAL MEDIA & BEHAVIORS

1	Samuel	Chou	3	Spencer	Rose	5	Kevin	Zhu
1	Justin	Cheng	3	Jonathan	Liu	5	Derick	Cheng
1	Yash	Sharma	3	Jovanny	Gonzalez	5	Calvin	Feng
1	Kimson	Lam	3	Nicholas	Costa	5	Sicheng	Song
1	Gray	Bittker	3	Gavin	Tucker	5	Zhicheng	Song
1	Alana	Commons	3	Bhagyavi	Bandara	5	Bithianie	Gustin
1	Lauren	Lee	3	Betania	Zelalem	5	Jacob	Albis
1	Dylan	Kaplan	3	Tommy	Jiang	5	Ray	Han
1	Molly	Webster			Wagner-	5	Edwin	Lu
1	Tom	Wang	3	Devyn	Morella	5	Maahir	Yousuf
1	Alaya	Conaway	3	Aiden	Bewley	5	Calvin	Spencer
1	Charles	Pye	3	Shamik	Chatterjee	5	Namie	Nakamura
2	Jason	Qjian	3	Jordy	Franco	5	Brandon	La
2	Pranav	Ramaswamy	3	Roshini	Rajkumar	6	Aranna	Tasnim
2	Vishal	Saminathan	4	Devon	Gay	6	Rafael	Romero
		Sivasubrama	4	Ryan	Zhang	6	Aadi	Dash
2	Shyam	nian	4	Yunfei	Zheng	6	Hayim	Sims
2	Albert	Chen	4	Samuel	Wang	6	Rayyan	Asif
2	Nishant	Aggarwal	4	Alexander	Wang	6	Jacob	Brady-McKay
2	Timothy	Connors	4	Michael	Han	6	Vincent	Xu
2	Anyee	Li	4	Kevin	Yao	6	Bryn	Kerslake
2	Helen	Liu	4	Edward	Zhang	6	Sanjith	Krishnan
2	Tyler	Power	4	Jessy	Wang	6	Vikram	Nandiwada
2	Carter	Fetchin	4	Zerui	Yuan	6	Svabhu	Govindaraj
2	Anika	Karre	4	Alex	Li			
2	Harrison	Hornwer	4	Owen	Li			
			4	Tianyi	Yang			

# Jamboard link

1:

[https://jamboard.google.com/d/1vNeyWUYxGYI--rly010dL\\_EbNDGOEqFvkn7bJuhTFk/edit?usp=sharing](https://jamboard.google.com/d/1vNeyWUYxGYI--rly010dL_EbNDGOEqFvkn7bJuhTFk/edit?usp=sharing)

2:

<https://jamboard.google.com/d/1pZJaJmtUWWi3ERMmFEu-18YFBXXNVawVKdwgsFvqgu8/edit?usp=sharing>

3:

<https://jamboard.google.com/d/16YFUikGIda8hx-inexRTubZmlC6kdwHn2M85o1LHFA0/edit?usp=sharing>

4:

[https://jamboard.google.com/d/1JP4eLg2qlgkOt25hh5GcFC\\_Bac71QjoPQgaEyiUfhyE/edit?usp=sharing](https://jamboard.google.com/d/1JP4eLg2qlgkOt25hh5GcFC_Bac71QjoPQgaEyiUfhyE/edit?usp=sharing)

5:

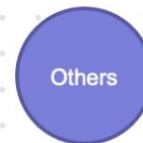
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6:

[https://jamboard.google.com/d/1zmMTsaRQ\\_Se3nyB9MMOdBUQXwY\\_tNk50eLsnMtNh5GY/edit?usp=sharing](https://jamboard.google.com/d/1zmMTsaRQ_Se3nyB9MMOdBUQXwY_tNk50eLsnMtNh5GY/edit?usp=sharing)

Step 2: What are good / bad behaviors when you use social media?

Step 1: What is your favorite or mostly used social media?



# DISCUSSION

# TEN COMMANDMENTS OF CYBER ETHICS

## **10 Commandments**

1. You shall not use a computer to harm other people.
2. You shall not interfere with other people's computer work.
3. You shall not snoop around in other people's computer files.
4. You shall not use a computer to steal.
5. You shall not use a computer to bear false witness.
6. You shall not copy or use proprietary software for which you have not paid.
7. You shall not use other people's computer resources without authorization or proper compensation.
8. You shall not appropriate other people's intellectual output.
9. You shall think about the social consequences of the program you are writing or the system you are designing.
10. You shall always use a computer in ways that show consideration and respect for your fellow humans.



# Ten Commandments of Cyber Ethics

- 1      Y / N
- 2      Y / N
- 3      Y / N
- 4      Y / N
- 5      Y / N

- 6      Y / N
- 7      Y / N
- 8      Y / N
- 9      Y / N
- 10     Y / N

Source: Computer Ethics Institute. N.d. "Ten Commandments of Computer Ethics".

# 1. YOU SHALL NOT USE A COMPUTER TO HARM OTHER PEOPLE.

- Intentionally interfering with other people's work
- Invading the **privacy** of individuals
- Do not use the computer in ways that may harm other people.



## 2. YOU SHALL NOT INTERFERE WITH OTHER PEOPLE'S COMPUTER WORK.

- Do not use computer technology to cause interference in using other users' work.
- Do not do the following:
  - Degrading or disrupting equipment, software, or system performance.
  - Using resources to interfere with the proper operation of any computer, or destroy data.
  - Intentionally interfering with other people's work.
  - Invading the privacy of individuals.

## RANSOMWARE



Blackmails you

## SPYWARE



Steals your data

## ADWARE



Spams you with ads

# Types of Malware

## WORMS



Spread  
across computers

## TROJANS



Sneak malware  
onto your PC

## BOTNETS



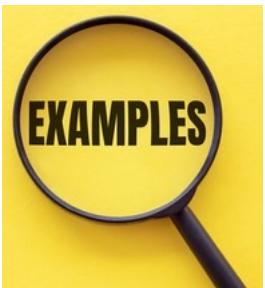
Turn your PC  
into a zombie

### 3. YOU SHALL NOT SNOOP AROUND IN OTHER PEOPLE'S COMPUTER FILES.

- Do not spying on another person's computer/tablet and their data.
- Using account owned by another user or allowing another user to access your account.
  - Any problems which arise from the misuse of a user's password will be that user's responsibility.
- Invading the privacy of individuals.



### 3. YOU SHALL NOT SNOOP AROUND IN OTHER PEOPLE'S COMPUTER FILES (CON'T).



## 4. YOU SHALL NOT USE A COMPUTER TO STEAL.

- Using resources in any manner that violates school/organizational board policy, federal, state, or local law including unauthorized copying or transmission of software.
- Do not use computer technology to steal information.



## 5. YOU SHALL NOT USE A COMPUTER TO BEAR FALSE WITNESS.

- Do not contributing to the spread of misinformation using computer technology.
- Initiating or forwarding “chain” letters.
- Downloading, storing printing, or distributing files or messages that are profane, obscene, threatening, or that use language that offends or tends to degrade others.

## **6. YOU SHALL NOT COPY OR USE PROPRIETARY SOFTWARE FOR WHICH YOU HAVE NOT PAID FOR.**

- Refrain from copying software or buying pirated copies of software. You must pay for software unless it is free.
- Using resources in any manner that violates school/organizational board policy, federal, state, or local law including unauthorized copying or transmission of software.



## **7. YOU SHALL NOT USE OTHER PEOPLE'S COMPUTER RESOURCES WITHOUT PROPER AUTHORIZATION OR COMPENSATION.**

- Do not use someone else's computer resources without proper authorization.
- Using information obtained through network and computer resources without giving proper credit to the source (plagiarism).
- Posting personal communication without the original author's consent.



## 8. YOU SHALL NOT APPROPRIATE OTHER PEOPLE'S INTELLECTUAL OUTPUT.

- It is wrong to claim ownership on a work which is the output of someone else's intellect.
- Posting personal communication without the original author's consent.
- Using information obtained through network and computer resources without giving proper credit to the source (plagiarism).

## 9. YOU MUST THINK ABOUT THE SOCIAL CONSEQUENCES OF THE PROGRAM YOU ARE WRITING OR THE SYSTEM YOU ARE DESIGNING.

- Before developing a software, think about the social impact it may have.
- Ethical standard as a software/computer program developer

## 10. YOU SHALL ALWAYS USE A COMPUTER IN WAYS THAT SHOW CONSIDERATION AND RESPECT FOR YOUR FELLOW HUMANS.

- In using computers for communication, be respectful and courteous with the fellow members.
- Downloading, storing, printing, or distributing files or messages that contain information considered dangerous to the public at large.

# CYBERSECURITY ETHICS AND CYBERCRIME IN A NUTSHELL

## Computer crime

1. You shall not use a computer to harm other people.

## Hacking, DDoS, malware

2. You shall not interfere with other people's computer work.

## Spoofing

3. You shall not snoop around in other people's computer files.

## Online fraud

4. You shall not use a computer to steal.

## Online hate speech, cyberbullying

5. You shall not use a computer to bear false witness.

## Digital piracy

6. You shall not copy or use proprietary software for which you have not paid.

7. You shall not use other people's computer resources without authorization or proper compensation.

## Online intellectual infringement

8. You shall not appropriate other people's intellectual output.

9. You shall think about the social consequences of the program you are writing or the system you are designing.

# IMPORTANCE OF CYBERSECURITY ETHICS

- Daily / professional use of the Internet and computer
- Potential cybercrime victimization experience

# CYBERSECURITY ETHICS AGREEMENT (HANDOUT)



I will use the cybersecurity knowledge and skills I gain in this class responsibly, for the protection of computing and information systems and the data they store or transmit.



I will use the cybersecurity knowledge and skills I gain in this class responsibly, for the protection of computing and information systems and the data they store or transmit

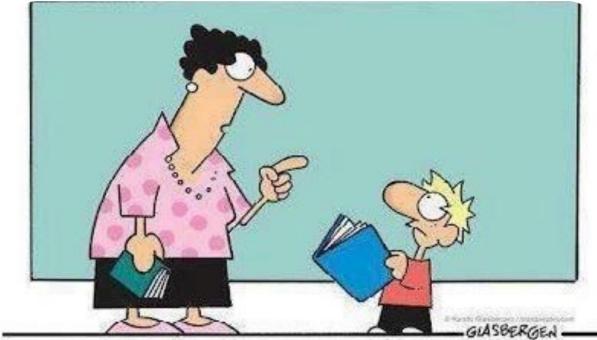


When making use of my cybersecurity knowledge and skills, I will exercise forethought and care, to prevent my actions from causing unintentional harm.

# HOW TO KEEP YOUR DIGITAL RECORDS SAFE/PRIVATE

# DIGITAL CITIZENSHIP

- Digital citizenship includes the ability to use digital resources in a responsible way.
- It means avoiding using resources illegally and always giving credit to an author/owner/creator when it's due.



It's called **reading**.  
It's how people install new  
software into their brains.

# BE A GOOD DIGITAL CITIZEN

## Legal

- Copyright
- Logins and passwords

## Appropriate

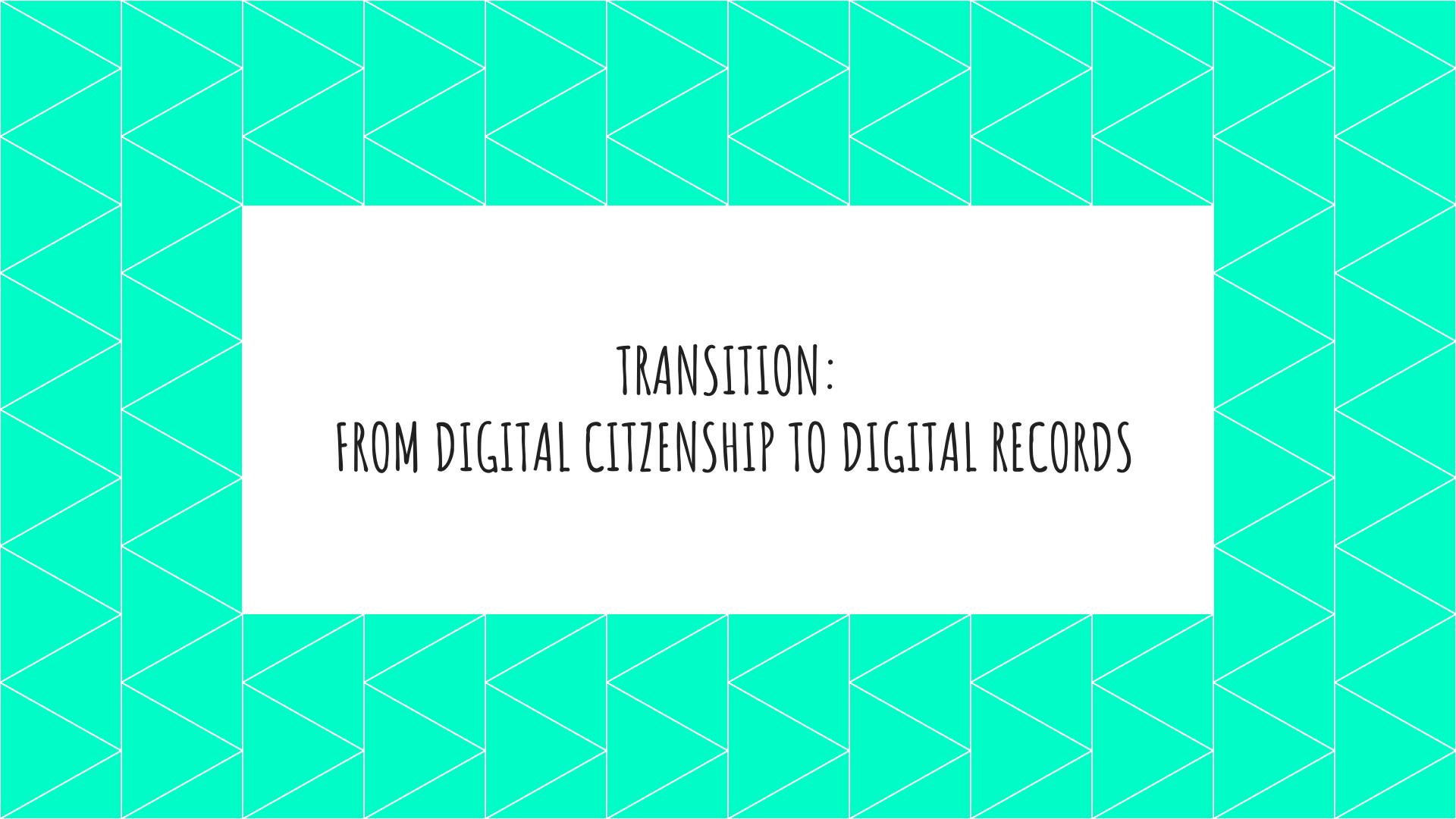
- Words and images
- Search engines
- Tell trusted adult if receiving inappropriate messages

## Responsible

- Prevent damage and misuse

## Kind

- Feelings
- People's rights
- Tone of messages
- Digital etiquette



# TRANSITION: FROM DIGITAL CITIZENSHIP TO DIGITAL RECORDS

# KEEPING DIGITAL RECORDS SAFE

- Protect private information for themselves and others
- Being safe online, and reporting behavior that isn't appropriate
- Balance the time they spend online and using media
- Carefully manage their digital records
- Respect themselves and others
- Stand up to cyberbullying them they see it happening
- Respect copyright and intellectual property

# YOUR OWN "ETHICS" RULES: FIVE RULES

BREAKOUT ROOMS DISCUSSION

# OUR GROUP'S "ETHICS" RULES

- 1.
- 2.
- 3.
- 4.
- 5.

One reporter per team

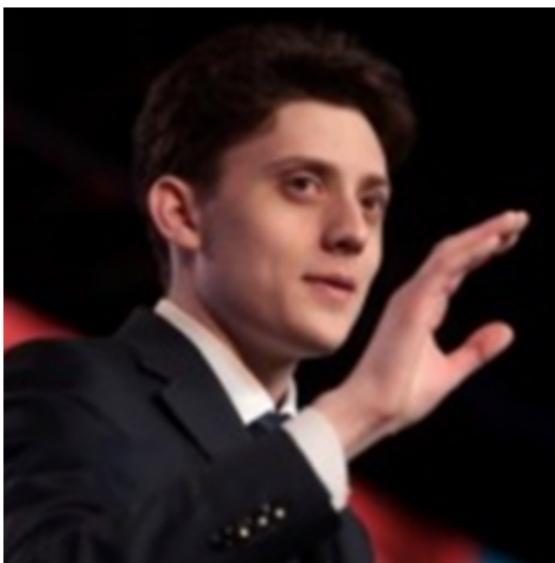
# HOW TO BE RESPONSIBLE

- **Explain what copyright is.** Why it's important for everyone to respect this important law.
- **Remind kids that they can't just use all the online resources they find.** Encourage children to always check to see who owns the rights to an online resource and to see if it is okay for them to use it (and to give credit, where credit is due).
- **Share a list of websites with copyright-free/copyrighted resources.** Come up with a list of websites where your children can use content with and without giving credit (visit [Creative Commons!](#)) to help them understand the difference. This list will also serve as their go-to list of websites to get videos, games, images, and other content

# Harvard Latest Revoked Admissions Offer

Student is famous as a survivor of Parkland shootings who is pro-gun and pro-Trump. He lost his spot at the university over racist writings when he was 16. Debate grows over Harvard's action.

By [Scott Jaschik](#) // June 24, 2019



**Kyle Kashuv** @KyleKashuv · Jun 17

12/ I believe that institutions and people can grow. I've said that repeatedly.

In the end, this isn't about me, it's about whether we live in a society in which forgiveness is possible or mistakes brand you as irredeemable, as Harvard has decided for me.



1.5K



1.7K



12K





## Discussion:

When are some instances you've seen people make poor decisions online?

Where are some apps you see these poor decisions play out?

# HOW TO SECURE YOURSELF / YOUR INFORMATION ONLINE

## What do you do?

- Question 1: Please look around your surroundings and tell me anything security-related item/device/measure.
- Question 2: How do you keep your social media information safe/private?

WHAT IS YOUR ONLINE IDENTITY?  
HOW WOULD YOU DEFINE YOURSELF ON SOCIAL MEDIA?

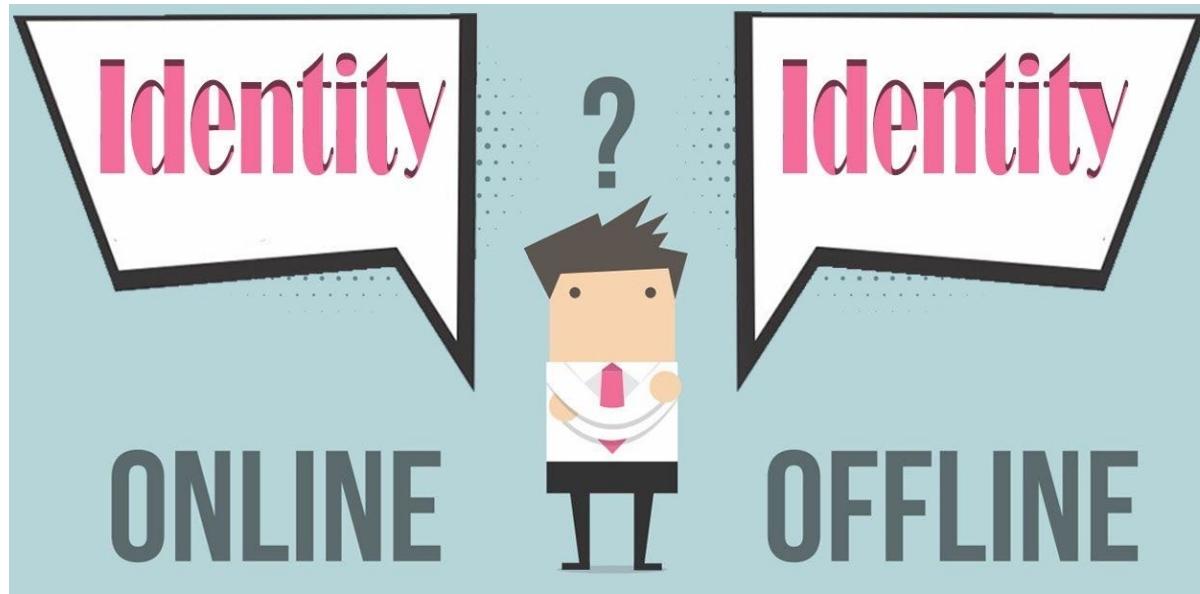
# ONLINE IDENTITY

- **Other names:** Internet identity, internet persona
- **Definition:** It is a social identity that an Internet user establishes in online communities and websites. It can also be considered as an actively constructed presentation of oneself.
- **Characteristics:** Although some people choose to use their real names online, some Internet users prefer to be anonymous, identifying themselves by means of pseudonyms, which reveal varying amounts of personally identifiable information. Some can even be deceptive about their identity.

POLL ([HTTPS://FORMS.GLE/GGKKXUKQQ8I4PWZJ6](https://forms.gle/GGKKXUKQQ8I4PWZJ6))



- MY OFFLINE IDENTITY IS IDENTICAL TO MY ONLINE IDENTITY.
- I PREFER MY OFFLINE IDENTITY TO MY ONLINE IDENTITY.
- I PREFER MY ONLINE IDENTITY TO MY OFFLINE IDENTITY.



# ONLINE IDENTITY MANAGEMENT

- Do you set up your social media profile as close to your offline identity?
  - If yes, why?
  - If no, why?

# ONLINE IDENTITY EXPRESSION AND CONCERNS



Mask



Reliability



Privacy

# BREAKOUT ROOM DISCUSSION

- Tell me about your favorite social media and why? Please join the group (your favorite) named as below:
  - Tiktok
  - Twitter
  - Instagram
  - Snapchat
  - YouTube
  - Discord

# BREAKOUT ROOM DISCUSSION QUESTIONS

- What age did you first get a phone?
- What are some activities you most use your phone for?: calls, texting, social media, video-chatting, games, study, etc.
- What if your phone got hacked/you lost your phone? What would worry you the most? What information would you worry about being collected?
- Have you ever been the victim of online identity theft?

One reporter per group is needed



DIGITAL RECORDS



150

# DIGITAL RECORDS

- Search for yourself on Google. If you have a common name, you might need to search for your name and the city you live in. For example, "John Smith, Boston".
- What comes up in your Google search?
- What was the most surprising thing that you noticed?
- What are some actions you should take to maintain a positive digital footprint?

# FOOD FOR THOUGHT

- What is a digital record?
- What does it mean that the internet is public and permanent?
- Who looks at your digital records and reputation?
- What are some recommended social media guidelines?
- How can you maintain your digital records?
- What do your digital records say about you?
- How could your digital records impact you down the line?



# QUESTIONS & COMMENTS

[claire\\_lee@umich.edu](mailto:claire_lee@umich.edu)



# Security

IS MANAGED BY

WHAT YOU DO

**TODAY**  
**ON THE NET**

# THANK YOU

**“You never really understand  
something until you understand how  
it relates to something you already  
know”**

Dr. Claire S. Lee  
[Claire\\_Lee@uml.edu](mailto:Claire_Lee@uml.edu)



[HOMEPAGE](#)

[drclairselee.wordpress.com](http://drclairselee.wordpress.com)

E-MAIL