

# CS 4873: Computing, Society & Professionalism

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Week 13: Pandemics and Ethics  
March 30, 2020

# Distance Instruction – The Reality

- This is not a social experiment in distance learning.
- This is a response to a global health crisis.
- This is all new and it may be difficult, but we will find our way together.
- Be prepared to have good days and bad days with the remote instruction and learn from both.
  - Without exaggeration time will be lost, and progress will be slowed, in just about all of our lives and learning situations
- Remember that screen time can be intense, especially when learning new things and experiencing difficulties.

Changes to course syllabus, deliverables, grading criteria.

Recorded lecture video on course's main Canvas; Recorded section discussion on the section's Canvas

# Mental and Physical Health Resources

- It is important to manage your mental, physical and public health needs
- If you are feeling overwhelmed with the COVID-19 situation or know someone else who is suffering, please reach out to GT Counseling:  
<https://counseling.gatech.edu/content/services>
- If you are feeling like you or someone you know is entering a crisis:  
<https://counseling.gatech.edu/content/students-crisis>
- General information about COVID-19, at the CDC's FAQ page: <https://www.cdc.gov/coronavirus/2019-ncov/faq.html>



# The Virus, the pandemic, and how we can respond **ethically**

# The efficacy of social distancing

- Curfews and social distancing will hopefully help mete out the number of infections slowly—because 2 million patients over 18 months will be more manageable than 2 million over six months.
- Yet all such predictions are essentially guesswork at this point.

# \* Early detection, contact tracing

- Leaders are looking for guidance on when to close schools or order residents to shelter in place, and whether the measures they've already taken are working.
- Early research on coronavirus suggests that isolating people soon after they become symptomatic plays the “largest role in determining whether an outbreak [is] controllable.”

# \* Role of technology – Existing examples

- One potentially powerful tool for public health officials is contact tracing—identifying the people that an infected person has been around.
  - This reveals potential outbreak hot spots, offers some idea of where the virus may spread next, and importantly, warns officials who to contact next and potentially isolate if they become symptomatic.
  - Faster than manual tracing
- Earlier this month, the CDC issued a temporary rule requiring airlines to share data on passengers traveling from overseas on request, including addresses, phone numbers, and email.



# Role of technology – Existing examples

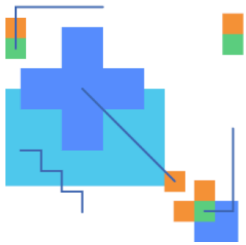
- Israeli Prime Minister Benjamin Netanyahu rolled out a surveillance program that uses the country's domestic security agency to track the locations of people potentially infected with the virus.
- South Korea has released detailed information on infected individuals—including their recent movements—viewable through multiple private apps that send alerts to users in their vicinity.
  - They're essentially texting people, saying, 'Hey, there's been a 60-year-old woman who's positive for COVID. Click this for more information about her path.'

# \* Role of technology – Novel approaches

- Officials have a powerful potential surveillance tool unavailable in past epidemics: **smartphones**
- Government officials are anxious to tap the information from phones to help monitor and blunt the pandemic
- White House officials are asking tech companies for more insight into our social networks and travel patterns

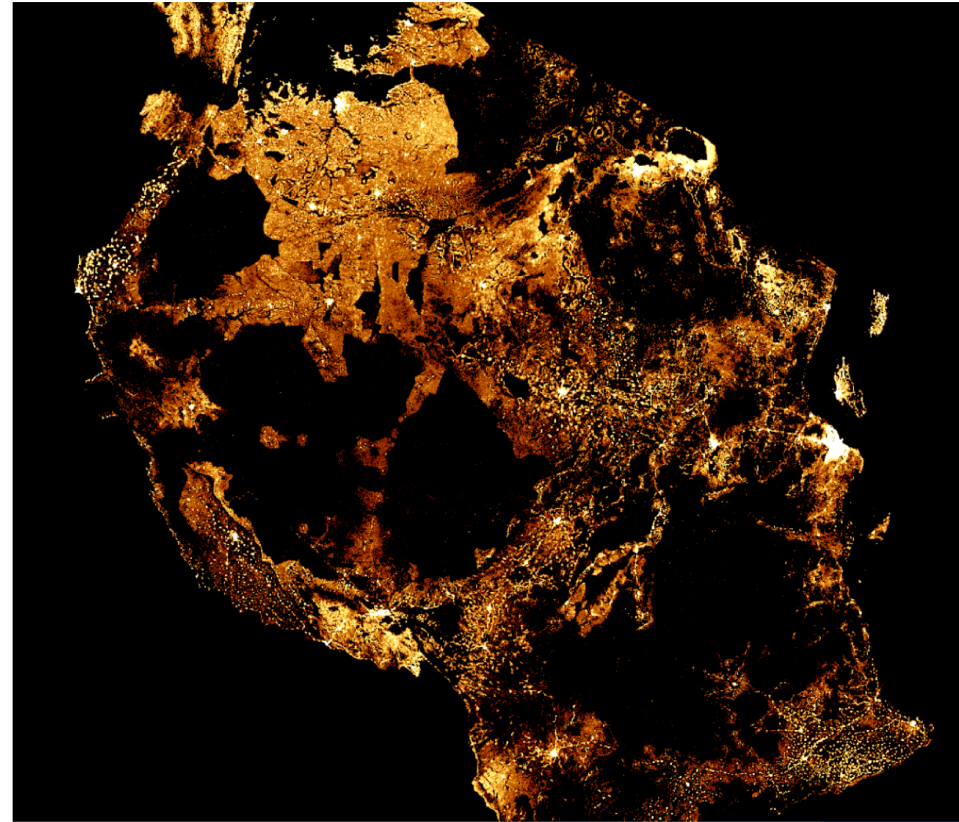
# Facebook's Disease Prevention Maps

- Facebook created a disease mapping tool that tracks the spread of disease by aggregating user travel patterns.
- "Disease Prevention Maps have helped organizations respond to health emergencies for over a year and we've heard from a number of governments that they're supportive of this work," Laura McGorman, Policy Lead of Facebook's Data for Good project, said in a statement to Business Insider.



## Disease Prevention Maps

Facebook Disease Prevention Maps are designed to help public health organizations close gaps in understanding where people live, how people are moving, and the state of their cellular connectivity, in order to improve the effectiveness of health campaigns and epidemic response. These datasets, when combined with epidemiological information from health systems, assist nonprofits in reaching vulnerable communities more effectively and in better understanding the pathways of disease outbreaks that are spread by human-to-human contact.



# Role of technology – Novel approaches

- Another potential -- tap the geofencing capability of phones, to learn who may have been near people infected with the virus
- Police have relied on geofencing in investigations, using broad warrants to request information on every smartphone near a crime scene.
  - Last May, police requested location data from every “Google account that is associated with a device” within 150 meters of a bank robbery.
- In theory for covid-19, Google could notify users whose phones were recently near an infected person.

# Role of technology – Novel approaches

- The controversial facial recognition startup Clearview AI says it is in talks with public officials to use its software to identify anyone in contact with people who are infected.
- The weapons detection company Athena Security claims its AI-enabled cameras can detect the coronavirus by spotting fevers.

# \* Privacy threats

- These possibilities raised red flags to privacy advocates
  - European and US laws
  - There's already legal debate over whether such actions would overstep the Fourth Amendment's restrictions on the government's ability to search private property.
- What are the specific privacy threats?

twitter.com/jeanniecrowley/status/1242855851829968896



Home



Explore



Notifications



Messages



Bookmarks



Lists



Thread



Lies about camera being broken to stay in PJs

@jeanniecrowley

It might be tempting to trade privacy/security/data for virus tracking, but historically when folks (usually white/cis/able bodied) decided price was "worth it", they weren't the ones paying the price. Thread on all the times marginalized groups paid the price without being asked

12:48 PM · Mar 25, 2020 · [Twitter Web App](#)

112 Retweets 172 Likes



Should the tech companies and the US government partner to use geotagged data to identify potential COVID-19 infections and its community spread?

- Kantian approach
- Utilitarian approach

According to David Leslie, an ethicist at the Alan Turing Institute: “We live in this age that has been called the age of surveillance capitalism, where ... our data is abused and exploited.” But, he adds, “authorities and the public will have to weigh the value of privacy against the possibility that data collection could save millions of lives. *These are not normal times.*”

*“Public policy must reflect a balance between collective good and civil liberties in order to protect the health and safety of our society from communicable disease outbreaks”* the Electronic Frontier Foundation

# \* A balance - Transparency

- The government should be really clear in articulating what specific public health goals it's seeking to accomplish
- \* Be clear about how the government is limiting the collection of personal data to what's necessary to achieve those very specific goals
- Making sure that there are appropriate privacy safeguards put in place before data starts to change hands

# A balance - Data collection based on science, not bias

- Ensure that any automated data systems used to contain COVID-19 do not erroneously identify members of specific demographic groups as particularly susceptible to infection
  - Avoid bias based on nationality, ethnicity, religion, and race—focus on facts about a particular individual’s actual likelihood of contracting the virus, such as their travel history or contact with potentially infected people.

# A balance – Parsimonious use of data

- Any data collection must be scientifically justified and proportionate to the need.
- Even anonymized, aggregate data can inform health efforts.
- Consider a scenario where city officials close bars and restaurants for a weekend, hoping to reduce the number of new coronavirus infections.
  - But instead, infections increase.
  - Some may be the result of exposures days earlier, but tracking where people went over the weekend could reveal new transmission hot spots.

# A balance – Due process

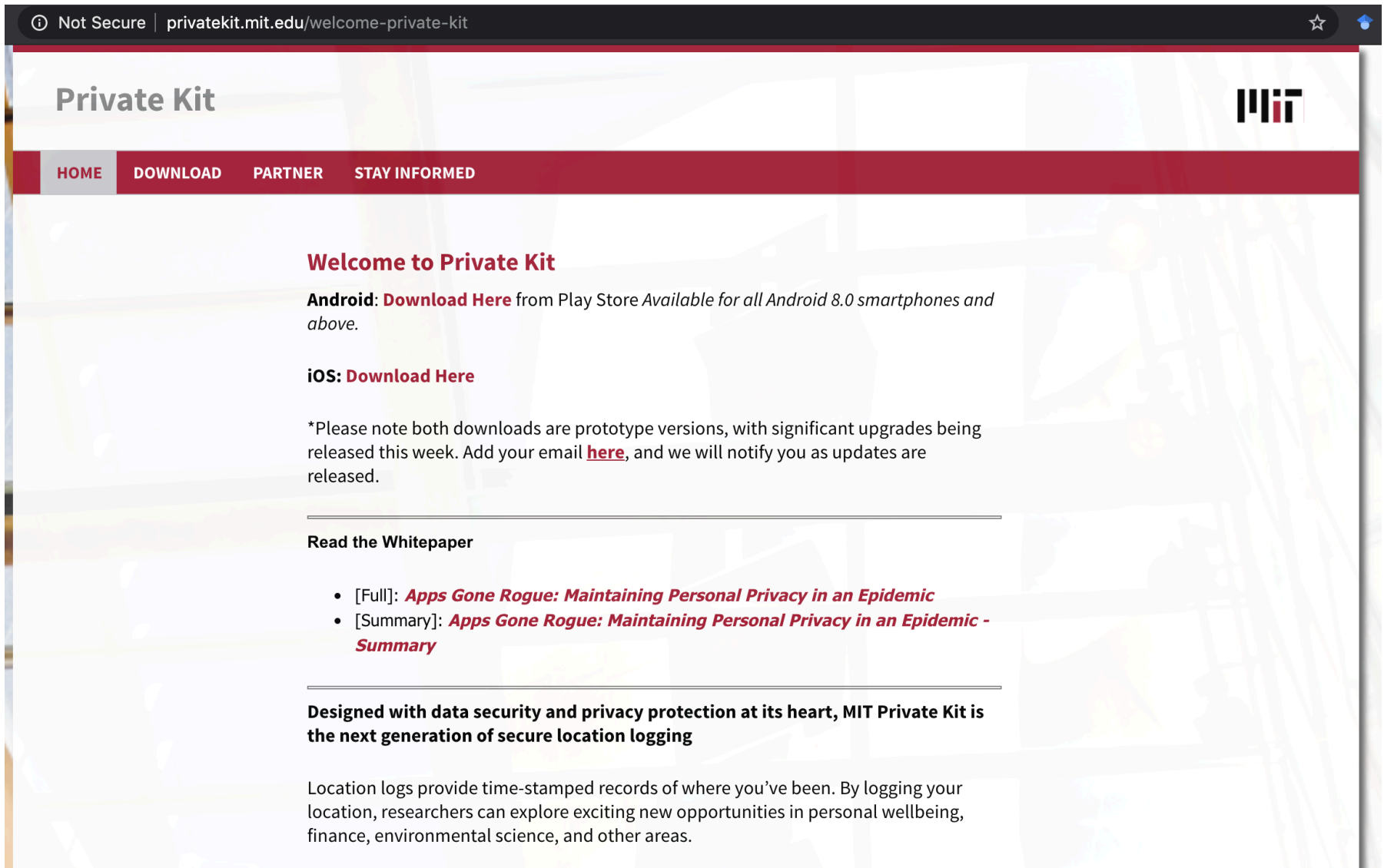
- If the government seeks to limit a person's rights based on this "big data" surveillance (for example, to quarantine them based on the system's conclusions about their relationships or travel), then the person must have the opportunity to timely and fairly challenge these conclusions and limits.

# A balance - Expiration

- There is a hazard that the data surveillance infrastructure we build to contain COVID-19 may long outlive the crisis it was intended to address.
- The government and its corporate cooperators must roll back any invasive programs created in the name of public health after crisis has been contained.



# Voluntary, privacy-conscious phone tracking systems



The screenshot shows the homepage of the Private Kit website. At the top, there is a browser address bar with the URL 'privatekit.mit.edu/welcome-private-kit'. Below the address bar is a dark red navigation bar with the MIT logo on the right and four menu items: 'HOME', 'DOWNLOAD', 'PARTNER', and 'STAY INFORMED'. The main content area has a white background with a faint background image of a building. The heading 'Welcome to Private Kit' is in a dark red font. Below it, there are two sections for downloading the app: one for Android and one for iOS. A paragraph of text explains that the downloads are prototype versions and provides an email address for updates. A horizontal line separates this from the 'Read the Whitepaper' section, which contains two bullet points with links to the full whitepaper and a summary. Another horizontal line separates this from the 'Designed with data security and privacy protection at its heart, MIT Private Kit is the next generation of secure location logging' section, which includes a paragraph about location logs.

Not Secure | privatekit.mit.edu/welcome-private-kit

## Private Kit

HOME DOWNLOAD PARTNER STAY INFORMED

### Welcome to Private Kit

**Android:** [Download Here](#) from Play Store Available for all Android 8.0 smartphones and above.

**iOS:** [Download Here](#)

\*Please note both downloads are prototype versions, with significant upgrades being released this week. Add your email [here](#), and we will notify you as updates are released.

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#### Read the Whitepaper

- [Full]: [Apps Gone Rogue: Maintaining Personal Privacy in an Epidemic](#)
- [Summary]: [Apps Gone Rogue: Maintaining Personal Privacy in an Epidemic - Summary](#)

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#### Designed with data security and privacy protection at its heart, MIT Private Kit is the next generation of secure location logging

Location logs provide time-stamped records of where you've been. By logging your location, researchers can explore exciting new opportunities in personal wellbeing, finance, environmental science, and other areas.



Contribute your health status daily and help track the COVID-19 pandemic

# How are you feeling?

 Great, thanks!

 Not feeling well

Your contributions will inform public health with real-time insights on the COVID-19 pandemic.

**mailchimp**

Get an all-in-one Marketing Platform that grows with you.

[Learn more](#)

DAILY COVER | 7,146 views | Mar 27, 2020, 06:00am EDT

# Two Million Guinea Pigs And Counting: The Remarkable Rise Of Self- Monitoring In The Time Of Coronavirus



- **But such apps will reduce the spread of disease only if a lot of people use them.**
- Because a tracking app can't capture every possible source of infection, it risks creating a false sense of security for users.
- Just because you don't see a dot on a map where a contact might have been doesn't mean that areas that don't have dots don't have infected people.

*“People give their stem cells for patients that need a stem cell transplantation. They give their blood. We hope that people think about the crisis, and are willing to give their data.”* – Creator of the MIT Private Kit app

Is this a reasonable comparison?