

Please let us ([Laura Norén](#), [Brad Stenger](#)) know if you have something to add to the newsletter. We are grateful for financial support from the Academic Data Science Alliance.

DATA SCIENCE NEWS

University Data Science News

A new [preprint](#) by **Stephen M Kissler**, **Christine Tedijanto**, **Edward Goldstein**, **Yonatan H. Grad**, and **Marc Lipsitch** of the **Harvard TH Chan School of Public Health** is one of the two big papers for this week. Their goal was to model what the next 5 years of coronavirus transmission could look like in various containment and mitigation scenarios with a focus on the next 12-18 months. They [summarize that](#) "intermittent social distancing [periods of tighter and looser stay-at-home orders] can prevent critical care capacity from being exceeded but such measures may be required for 12-18 months. Depending on R_0 and the amount of seasonality, social distancing must be 'on' for as little as 25% but up to 70% of the time." These periods of on-and-off social distancing may need to extend into 2022 and critical care capacity would need to be expanded in order to prevent hospitals from periodically turning into hellscape of people dying avoidable deaths.

Many universities including **MIT** ([link](#)) and **NYU** ([link](#)) have now canceled or postponed graduation ceremonies this spring. If we assume Harvard's epidemiologists are correct, and that we will be in a temporal and spatial patchwork of staying-at-home vs getting out and about, it will be exceedingly difficult to plan any conference or large event with any degree of confidence. Professional sports leagues may be able to handle it by eliminating spectators from playing in some cities and asking all players and refs to essentially self-isolate. But big conferences and ceremonies that must be planned well in advance, bringing people from all over the world, are going to run high cancellation risks due to local outbreaks or distant outbreaks that cause speakers and attendees to cancel in large numbers.

If you like cutting edge science newsletters — and I bet you do! — you might want to read one or more of [ProMED's newsletters](#). A project of the **International Society for Infectious Diseases**, the public health newsletters are for Experts by Experts. They [produced the first English language story about COVID-19](#). Their global network of researchers and academics tends to run stories on novel diseases and new outbreaks of known diseases like Ebola, Zika, and Nipah.

A new paper by **Joseph T. Wu** et al. has [newly estimated the fatality rate of COVID-19 at 1.4% using data from China](#), estimating across everyone who had any symptoms. [Other research](#) is reporting a 2.3% case-fatality rate in China. Meanwhile, the fatality rate among known positive cases in Italy (which excludes unknown positive among people who have COVID-19 but didn't get tested) is [upwards of 7.2%](#).

Graduate students and postdocs — careful to note that other people are in similar situations or worse — are worried that **their years of preparation for academic careers may put them on a barren job market**. To those who worry, I empathize. **Brown** has **announced a hiring freeze for the upcoming fiscal year** and they aren't alone (see also: **Portland State**, etc.) These are difficult times.

Researchers using mice as their animal models are **being directed to euthanize some** in order to reduce the demands of caring for them and send lab staff home to safety. These are difficult times.

Susan Athey (Stanford) and **Andrew Gelman (Columbia)** plus a bunch of their statistically talented colleagues are putting together a **free online causal inference lecture series**. OK, Zoomers, add another one to your calendar.

Hinge for COVID sounds like an episode of *Silicon Valley*. There have been discussions about phone service providers and device makers like **Google** and **Apple** forcing people to be surveilled tracking where their phones are, but now you can **opt-in without waiting** for the big guns to enter the fray. **Boston Children's Hospital** has also launched an opt-in website, **coronanearyou.org**, where US residents can **voluntarily report their location and symptoms** to generate a more granular map of COVID-19 and flu activity. If we had better testing, we probably wouldn't need these tools, but I guess in this case the build-an-app route is better than nothing.

Larry Bacow President of **Harvard University** has tested positive for COVID-19. **Twitter was unkind**.

... because **Harvard** has let all of its dining hall staff go **without protection for their lost income**. Regular employees get 30-days paid leave, but the subcontractors who work in dining halls apparently do not. Twitter has not been happy about that, either.

Mila has a **whole range of COVID19 initiatives** from omics in the service of vaccines to mapping the entire research field of new COVID19 papers, to **Yoshua Bengio** heading up a deep reinforcement learning algorithms, to evaluating therapeutics via molecular structure, to discovering patterns in tweets. I'm slowly accepting that with the lack of testing in California, **Twitter** may turn out to be a better predictor of the case rate than official test results.

Dr. Atul Gawande writes about the risk to health care workers who are 3 times more likely to get COVID19 than the general population. Rightfully, they are scared of becoming infected and of infecting their loved ones. That said, **they may not have to quarantine after every accidental exposure** as long as they aren't symptomatic and are practicing excellent hygiene practices. He didn't address the anxiety these workers are feeling as a result of the threat of dying, of infecting someone they love, as a result of equipment shortages, and as a result of lacking trust in agency leadership.

Gavin Schmidt of the **NASA Goddard Institute for Space Studies** **weighed in** on whether or not

the stay-at-home orders are a climate change win. The short answer is that even if we cut emissions by 20%, we are still pumping out way too many greenhouse gases. The air *is* noticeably cleaner, but this is a double edged sword. Even though vehicle and airplane emissions are down, the aerosols they produce reflect some of the sun's energy. Now we get all that energy full strength. However...many workplaces will come out of this realizing that working in the office is less productive than working from home (lowering commuter pollution) and that much travel does not need to happen (goodbye flying in and out for a single meeting).

Climate scientists believe we need to **set aside a substantial part of the planet** — 30-51% depending on which team you talk to — for natural preservation in order to make sure the Earth remains habitable by humans.

Still, another **new paper** looks at the fact that as people get wealthier, they use more energy — quite a bit more; "The most energy intensive thing that wealthier people do is move around more, in cars, ships, and planes." So if we can convince the wealthier among us to value their local air quality over their desire to move around at the click of a button, we'd really be winning.

Oregon State is **offering** a new **accelerated postbacc Computer Science degree** for people who already have degrees in other fields — including MDs and PhDs. Students can take courses online and adjust their course load to fit other demands on their time.

Stanford professor **James Zou**, whose background is in biomedical statistics, is teaching **Data science and AI for COVID-19** starting in April. The course will model COVID-19 and then build new global health tools.

Allison Koenecke a PhD candidate at **Stanford** compared the accuracy of speech recognition algorithms produced by **Amazon, IBM, Google, Microsoft** and **Apple** against speech sets from a mostly white and Asian American California group and one from a mostly black American speech set. **Errors were common across both datasets.** However, "the systems misunderstood 35 percent of the words spoken by blacks but only 19 percent of those spoken by whites." How much more work is it going to take to convince people that race and ethnicity matter in America. We may not want to live in a country that was founded on slavery, but we do. We still do. That's still the relevant history. If we want to have a different future, we need to learn how to at least test systems to understand their potential for replicating racial and ethnic bias. Come on, AI tech. Let's do better.

Company Data Science News

O'Reilly Media, hosts of events like Strata London, Strata California, foo camps, and, at times, JupyterCon has laid off everyone in their events business and does not plan to reopen that division. President **Laura Baldwin** **notes**, "[w]ith large technology vendors moving their events completely on-line, we believe the stage is set for a new normal moving forward when it comes to in-person events." I admit, I didn't see this coming.

Ring, the camera-enabled doorbell division of **Amazon**, has claimed that it's neighborhood

surveillance helps reduce neighborhood crime. A [new investigation](#) by **Alfred Ng** finds that there is no conclusive evidence of that. Part of the issue is that crime has been falling for years, so in many cases Ring representatives *can* accurately claim that crime has fallen since Ring cameras have been installed, they cannot claim that the decrease was caused by Ring or even that the crime rate patterns changed. Further, while Ring likes to trot out stories in which Ring cameras were used to stop crime in action or identify criminals, those cases are relatively rare. Keep this in mind as you hear claims about the benefits of pervasive surveillance increase, especially during this very real public health pandemic.

Last week **Bill Gates** stepped down from his corporate board positions at **Microsoft** and **Berkshire Hathaway**. This week he did a [reddit AMA on COVID-19](#).

Intel has [created a neuromorphic computing system](#) composed of 768 chips. All together it has about as many neurons as the brain of a rodent. The architecture mimics brain architecture by using, "extreme parallelism, many-to-many communication and asynchronous signals."

GitLab happened to have conducted a [survey on working remotely](#) right before COVID-19 that was released this week. The survey was mostly conducted with people who already did or could work remote, so it would be a stretch to directly compare their findings to those who were plunged into remote work with little warning or choice. The most commonly cited benefits were:

- + flexibility (53%),
- + lack of a commute (38%),
- + reduced stress (32%) [This one is REALLY non-comparable]

The drawbacks may somehow be more familiar:

- + managing distractions (47%),
- + isolation and loneliness (35%),
- + difficulties with collaborating (35%)

You're not alone even though you are more alone than ever.

In fact, "chronic loneliness produces a similar mortality risk to smoking 15 cigarettes a day" (a point that was much-discussed in [a recent Freakonomics podcast](#)). Finding ways to engage in distant socializing in this time of social distancing is critical. **Stanford** loneliness researcher **Jamil Zaki** [advises](#) that one of the kindest things we can do is to lower our expectations, go easy on deadlines, let presence be enough, let go of perfection.

Anthony Fauci models the attitude of going easy on ourselves by describing his success metrics as being exhausted, not infected, not giving up, and not fired (as of press time). He has one of the most important, difficult jobs: trying to [distribute truthful information about COVID-19](#) to the public and to the President. When pressed to push back against the President's version of events, Fauci responded, "I mean, seriously Jon, let's get real, what do you want me to do?" Fauci is my kind of public scientist right now.

The wearable company **Oura** will have its wearable rings utilized in **a study among health care workers** at **UCSF** to monitor the onset of COVID-19 symptoms. Their UCSF research partners plan "to develop an algorithm that can predict onset of symptoms such as fever, cough, and fatigue." A **second phase of the study** is planned among current owners of the Oura ring. The study follows on the heels of a **\$28 million funding round** for Oura led by **Google's Gradient Ventures, Square** and **Forerunner Ventures**.

Government Data Science News

The World Health Organization has announced **a large global trial of four existing drug therapies** to see if any of them prove helpful in the fight against COVID-19. The trial will include:

- + an experimental antiviral compound called remdesivir;
- + the malaria medications chloroquine and hydroxychloroquine; [this didn't work in China where it was already tried]
- + a combination of two HIV drugs, lopinavir and ritonavir;
- + and that same combination plus interferon-beta, an immune system messenger that can help cripple viruses.

The effort is admittedly fueled in equal parts by hope and evidence. There is neither time nor human research-power to run double-blind trials.

China has all but conquered its first wave of the COVID19 pandemic with new cases dropping to zero per day in Wuhan. Doctors and epidemiologists there are now **working out how to avoid a second wave**, given how interconnected the world is and how infectious COVID19 is.

The coronavirus stimulus package contained several funding streams related to universities. First, all federal student loans are **deferred for six months**, during which no interest will be charged. Borrowers in default will avoid having their wages garnished for the same six months. Higher education will receive about \$14.25 billion in an "education stabilization fund" which will help repay some of the refunded housing and meal plan dollars that went back to students. Some schools like **Quinnipiac** have also announced cuts to faculty salaries.

Extra Extra

"The global podcasting market will **grow by 30% in 2020**" to \$1.1 billion according to **Deloitte**.

Planet Money put together a **20 minute podcast** on COVID-19 testing that explains the challenge, why the US hasn't risen to it, and what other countries did differently.

Megan Sawyer and Leah McElrath **shared via Twitter** "The 16 Stages of Pandemic."



Leah McElrath 🇺🇸
@leahmcelrath

"The 16 Stages of Pandemic"

(Of course, none of this is actually funny, but we have to use all our healthiest defenses to make it through this period psychologically intact, including humor...)

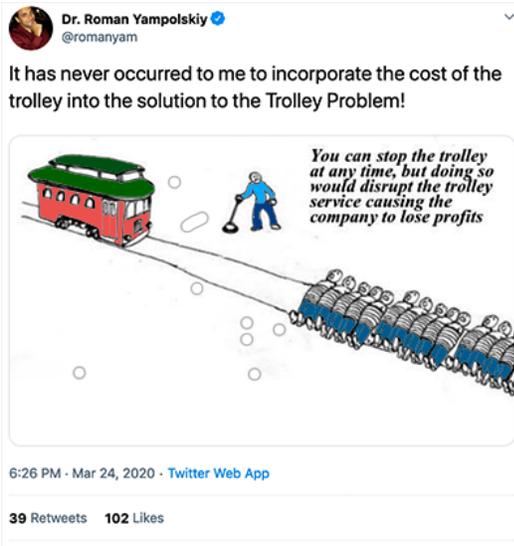
This made me smile. Maybe it will make you smile too 😊

h/t @ghost_girl13



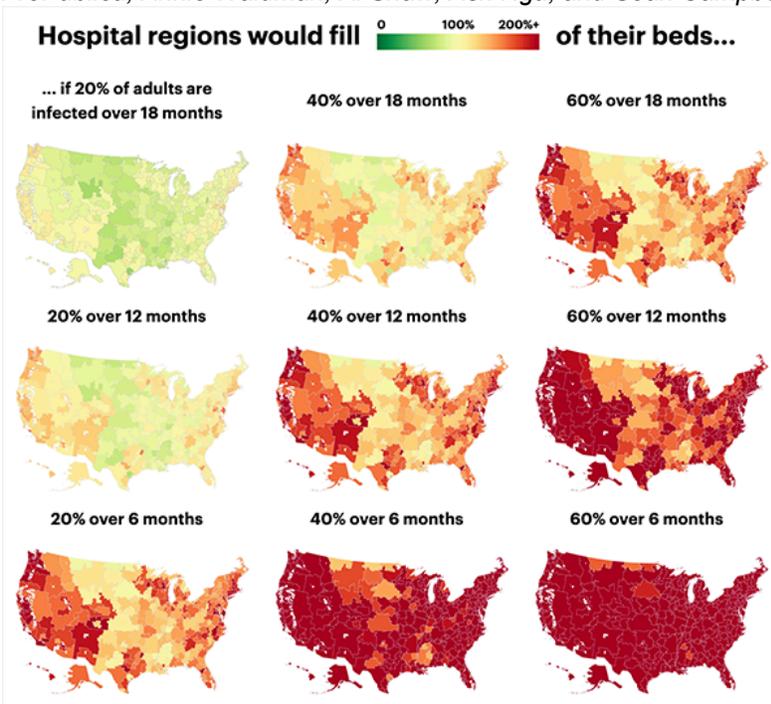
Tweet of the Week

Twitter, Dr. Roman Yampolskiy from March 24, 2020



Data Visualization of the Week

ProPublica; Annie Waldman, Al Shaw, Ash Ngu, and Sean Campbell from March 17, 2020



EVENTS

COMBAT HUMAN TRAFFICKING CHALLENGE – 2020 – ONLINE EVENT

Online March 28-29. "Blue Compass is honored to partner again with George Mason University's Schar School of Policy and Government-Terrorism, Transnational Crime and Corruption Center (TraCCC) on a second hackathon to combat human trafficking as a part of our #ExpeditionHacks series." [tickets required]

Webinar: Rapid communication of COVID-19 research

Online March 31 at 12 pm ET. "Join **ASAPbio** and the **Knowledge Futures Group** for a conversation about new ways of sharing scientific information relevant to the coronavirus pandemic via preprints, rapid peer review, and more. Individual talks will be followed by a round-table discussion and an audience Q&A period." [registration required]

COVID-19 and AI: A Virtual Conference

Online April 1. The virtual conference "will convene experts from **Stanford** and beyond to advance the understanding of the virus and its impact on society. It will be livestreamed to engage the broad research community, government and international organizations, and civil society." [rsvp required]

MIT Covid19 Challenge

Online April 3-5. "Build a solution for the COVID-19 crisis. **MIT** is hosting a series of challenges to empower YOU to take action on the COVID-19 crisis." [application required]

HIMSS20 Digital

Online On demand. "You told us what you wanted for **HIMSS20 Digital**—and we're bringing it to you. We've got education, thought leadership, special learning opportunities and more... everything you need to transform global health and wellness—and be the change."

2020 Genetic and Evolutionary Computing Conference

Online July 8-13. "Given the current situation with COVID-19 around the world and because nothing is more important than the health and safety of our attendees, the GECCO organizing committee has decided that GECCO 2020 will be an electronic-only conference."

ICML 2020 Conference

Online July 12-18. "ICML 2020 will be a virtual conference. We have plans to enable most normal conference events virtually. We will continue to post refined plans as we make decisions, in conjunction with other conferences." [registration opens April 20]

Announcing the Disrupt SF Digital Pass

San Francisco, CA, and Online September 14-16. "We're announcing plans to offer access to **Disrupt SF** content and networking opportunities virtually for our flagship event." [free, registration required]

DEADLINES

Contests/Award

COVID-19 Open Research Dataset Challenge (CORD-19)

"A list of our initial key questions can be found under the Tasks section of this dataset. These key scientific questions are drawn from the NASEM's SCIED (**National Academies of Sciences, Engineering, and Medicine's Standing Committee on Emerging Infectious Diseases and 21st Century Health Threats**) research topics." ... "Many of these questions are suitable for text mining, and we encourage researchers to develop text mining tools to provide insights on these questions." Round 1 submission deadline is April 16.

Journal/Publishing

Visualization & HCI researchers (especially PhD students or postdocs): If you have a vis-related CHI paper this year and want to write a post for Multiple Views for more visibility

DM me @vis_research

If you're having trouble DMing @vis_research DM me, @FILWD @dalbersszafir [thread]

Studies/Surveys

NYU Survey - College in the Time of Coronavirus

Survey for ****STUDENTS**** about what is and isn't working for them as class move online.

Help graduate students at NYU gain insights about business news readership in the US.

"If you are based in the US and you are an FT subscriber, a former subscriber, or an aspiring subscriber, we want to hear from you." ... "Two ways you can participate: talk to us one-on-one" ... "or take a survey. We have one that takes about 5 minutes and one that is 20."

@RockefellerUniv scientists are urgently seeking people who have recovered from #coronavirus infection

Your cells may hold the key to fighting #COVID19 !!

INFO: <http://clinicalstudies.rucare.org/coronavirus>

RFP

Given shift to virtual classes and events, am interested to explore Sloan support for research on outcomes/experience as well as new models beyond Zoom/Slack paradigms.

Can turn around funding at small scale fast. Email me Letters of Inquiry; DMs open for leads/pointers.

[**Josh Greenberg at Sloan Foundation**]

TOOLS & RESOURCES

New podcast bridges the gap between academia and policymakers

Penn State University, Penn State News from March 19, 2020

"How can academia and government work together to tackle problems? That's the question that a new podcast launched by the Evidence-to-Impact Collaborative, a unit of **Penn State's Social Science Research Institute**, is trying to answer."

"The podcast, aptly titled the 'Evidence-to-Impact Podcast,' focuses on conversations between Penn State researchers from multiple disciplines and government partners from across the commonwealth about relevant policy issues like poverty, criminal justice, substance abuse and healthcare."

OpenVentilatorRegistry: The main repository for the Open Ventilator Registry project.

GitHub - openventilatorregistry from March 22, 2020

"The Open Ventilator Registry is calling on software engineers to help build a platform for hospitals to report on their stock of ventilators and if they have a surplus or deficit. Hospitals with a surplus can then send their supply to hospitals in greatest need. We aim to create a nimble and decentralized supply chain and distribution network of these life saving devices."

Tips on remote teamwork from the Coop

Fred Hutchinson Cancer Research Center, Bioinformatics & Data Science Cooperative, Carly Strasser from March 17, 2020

"The Coop is community-focused; we run events, host office hours, teach courses through fredhutch.io, and connect with researchers to help them with their data-related questions. Needless to

say, the COVID-19 situation has impacted our ability to connect, both with researchers and within the Coop team itself." ... "Here are some ways the Coop team is staying engaged and productive during this period of remote work."

covid19-r repo

GitHub - mine-cetinkaya-rundel from March 22, 2020

"This repo links to a collection of analyses on and representations of COVID19 data in R. Inclusion on the list does not mean the analysis was verified by me or that I endorse the findings. It should also be noted that some of the analysis / data might be out of date, so these should not be viewed, by default, as current findings."

Teach Remotely - Learn best practices, available tools, and how to get support for teaching your classes online.

Harvard University from March 10, 2020

Get Started

Best Practices: Online Pedagogy

Technology and Tools

Library Resources

Get Help

How to Move Past Elasticsearch's Scaling Challenges

The New Stack, Ryan Staats from March 23, 2020

"At **LogDNA**, we developed a solution for scaling Elasticsearch to petabyte scale. Our solution leverages Kubernetes to automate the deployment, scaling and maintenance of Elasticsearch nodes across many cloud and on-premise platforms."

We're making free subscriptions available to all #COVID19 researchers

Twitter, Globus from March 17, 2020

"We're making free subscriptions available to all #COVID19 researchers: <http://globus.org/covid-19>. We hope this small gesture helps alleviate the huge data sharing/management burden being placed on institutions around the world."

We've digitized the @WHO 's Minimum Reporting Form for COVID-19 and made it freely available for anyone to use in ODK.

Twitter, Open Data Kit from March 24, 2020

"This form ensures that case investigation data can be systematically collected and shared across many different settings. Get the form at <https://forum.opendatakit.org/t/25647>."

About - unhangout.media.mit.edu

Katherine McConachie, Charlie DeTar, Philipp Schmidt, Yumiko Murai from March 23, 2020

"Unhangout is an open source platform for running large-scale, participant-driven events online."

How to talk to your older parents about the coronavirus

Futurity, Duke University from March 24, 2020

"Like many of us, **Cathleen Colón-Emeric**, chief of the **Division of Geriatrics at the Duke University School of Medicine**, has older parents who live nearby. She's familiar with the decisions facing many families, including her own, right now."

"Here she talks about extroverted elders, professional caretakers, and other factors."

Tidying the new Johns Hopkins Covid-19 time-series datasets

R-bloggers, An Accounting and Data Science Nerd's Corner blog from March 23, 2020

"Just hours after my old blog post about tidying **Johns Hopkins** CSSE Covid-19 data the team has changed their time-series table data structure. The data of the old post is still available but won't be updated. This new blog post is based on the new times-series data structure. Currently, they only seem to provide time series data on confirmed cases and deaths."

"The main reason for me sharing this code is that I did not find code that merges standardized country level identifiers to the data in a semi-automatic way."

CAREERS

Tenured and tenure track faculty positions

Assistant/Associate Professor and Director of the Spatial Analysis & Visualization Initiative

Pratt Institute, School of Information

Full-time, non-tenured academic positions

Program Analyst, Ocean Team

University of California-Berkeley, Haas School of Business; David and Lucile Packard Foundation; Berkeley, CA

Visiting Assistant Professor in Learning Engineering

Boston College, Lynch School of Education; Chestnut Hill, MA

Postdocs

Postdocs (2) Computational Sociology - Science of Science

University of Copenhagen, Department of Sociology; Copenhagen, Denmark

NEON Postdoctoral Fellows

Battelle, National Ecological Observatory Network (NEON); Boulder, CO

Two postdoc positions available in the Duffy Lab at Michigan!

University of Michigan, Department of Ecology & Evolutionary Biology; Ann Arbor, MI

Postdocs/Research Scientists in Digital and Computational Demography

Max Planck Institute for Demographic Research, Lab of Digital and Computational Demography; Rostock, Germany

Postdoctoral Research Associate

University of Illinois at Urbana-Champaign; School of Information Sciences; Champaign, IL

Full-time positions outside academia

Data Scientist

Observable; San Francisco, CA

Machine Learning Engineer - High-Performance Deep Learning and Neural Computing

Target Data Sciences; Sunnyvale, CA

Director, IARPA Office of Collections

Office of the Deputy Director of National Intelligence for Strategy and Engagement (S&E); Bethesda, MD

Director, IARPA Office of Analysis

Office of the Deputy Director of National Intelligence for Strategy and Engagement (S&E); Bethesda,

MD

Senior UX Designer

CCC Information Services; Chicago, IL

UX Researcher

TomTom; Farmington Hills, MI

Internships and other temporary positions

Data Science Intern - Merch Product Development

Stitch Fix; San Francisco, CA

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To send us an announcement for the newsletter, please email laura.noren@nyu.edu and brad.stenger@gmail.com. We retain curatorial discretion.

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