

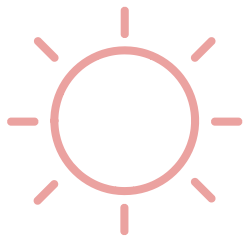


*Expand Your Horizons*

# TECHNICA

2020 Annual Report

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## Letter from the Executive Directors

The Technica community has come a long way. Our rapid growth has led to our team making significant progress in the space of gender equality in tech. However, we realize that there is still a ways to go before we reach true gender parity.

This is why we strive to create a safe, diverse, and inclusive community for underrepresented genders each year. Technica aims to provide resources for marginalized groups, allowing everyone an equal opportunity to pursue a future in tech.

2020 has been an unprecedented year in every way and Technica 2020 was no exception — leading to our first ever virtual event. Despite the challenges that came along with hosting an online hackathon, our team embraced this opportunity to grow and innovate. We built a state of the art in-house platform and introduced two tracks for beginners and hardware enthusiasts alike. This year we also doubled our attendance, hosting 1868 hackers from across 45 US states, 36 countries, and 6 different continents, resulting in the most inclusive and accessible Technica yet!

Our annual report keeps a public record of our efforts and accomplishments, while also recognizing the hard work that goes into each iteration of Technica. It also gives us the opportunity to show our appreciation for our hackers, sponsors, mentors, volunteers, student organizers, and alumni and their countless contributions to the Technica family. It truly takes a village, and we deeply thank you all for your unequivocal belief in the mission.

We hope you left Technica inspired, emboldened, and excited to continue to explore the possibilities of the tech sphere! We look forward to seeing you next year.

Warmly,

Gesna, Renee, and the Technica 2020 Team



**Gesna Aggarwal**  
Co-Executive Director



**Renee Yang**  
Co-Executive Director

## Quick Statistics

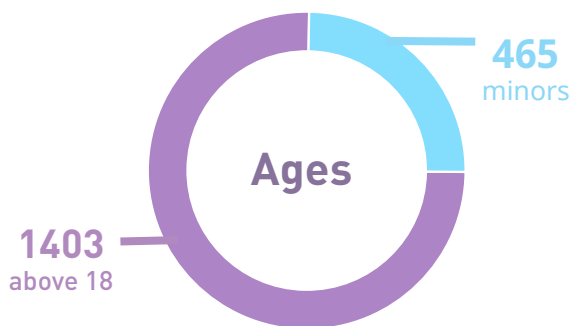
2

**1868**  
**Total Hackers**  
Technica Record!

**49.95%** First-Time Hackers

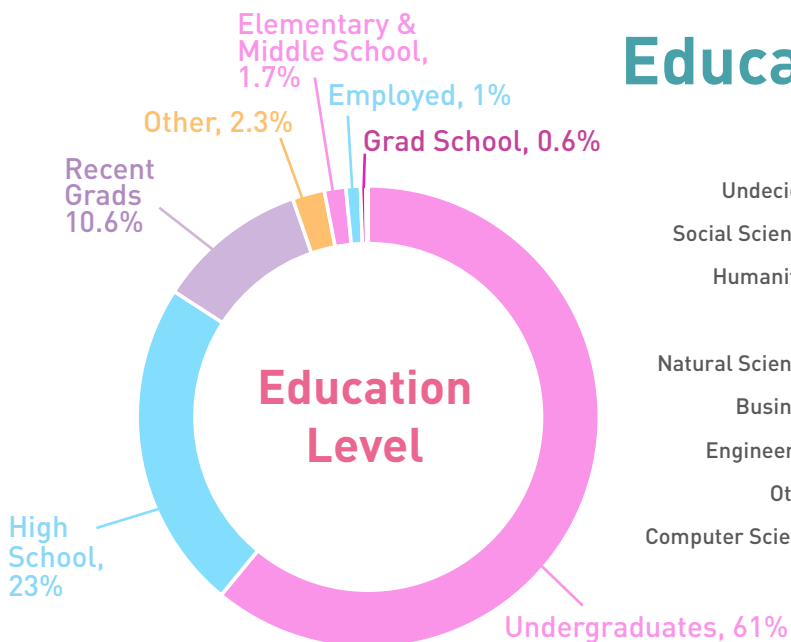
**65.17%** First Time at Technica!

## Hacker Demographics

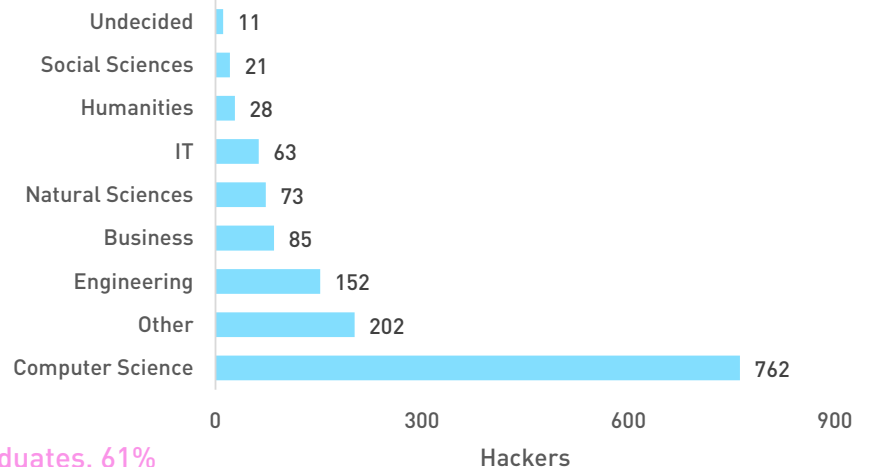


**1808** Female Hackers  
**55** Non-Binary Hackers  
**5** Other

## Education



## Hackers by Major



## Notable Achievements



### Hackers from 6 Continents

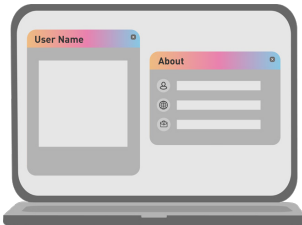
Technica 2020 focused on expanding horizons. Going virtual allowed us to expand Technica's horizons to welcome hackers from 6 continents. For the first time, Technica had representation from all over the globe. Some hackers were able to share their cultures through song and dance at our Open Mic Night event.

### Upholding the World Record

Last year, we broke our own world record as the largest all-women and non-binary hackathon in the world. This year, we built upon this feat by welcoming 1868 total hackers onto our custom-built platform: a ~1000 participant increase from our previous total. In the process, we also became UMD's largest hackathon.



### In-house Hackathon Platform



Our tech team developed a platform to ensure hackers, sponsors, and mentors a smooth, unified Technica experience. Organizers prototyped, debugged, and iterated over many months before deploying the platform featuring integrated video chatting links, team formation features, help for attendees, schedule highlights, and a passport system.

### Speakers

Opening speaker Jewel Burks heads Google for Startups in the United States. She graduated from Howard University later founding Partpic, a startup acquired by Amazon. Jewel advocates for underrepresented communities as Managing Partner at Collab Capital and reImagine:ATL board member. Our closing speaker, Cadran Cowansage, founded Elpha, a community providing resources to women in tech.



## Notable Achievements: Tracks

### Beginner

This year, we strove to better support beginner hackers by pioneering our Beginners Track. This track was designed to provide beginners with additional resources, ideas, and techniques to help them be successful at Technica and beyond. We provided support for 61 beginner hackers from around the globe to expand their horizons and connect with each other.



### Hardware

The hardware track was launched this year, and it exposed 31 participants to the hardware side of computer engineering. We aimed towards making this track as approachable as possible and designed it with attention for beginners with minimal to no experience in hardware. Inspired by the effectively accessible Arduino technology, we sent our participants Arduino developer kits with the necessary beginner components and provided supplemental materials to help them get started. Participants were encouraged to incorporate different components in their unique and relevant hacks in order to demonstrate a higher-level understanding of an electronic system.



### Tech + Research

Tech + Research surpassed its previous years' record, with more than 80 participants this year. During the 3-day workshop, participants worked alongside incredible research faculty and mentors, creating comprehensive research projects. The track provided hackers with long-lasting connections and great knowledge of research in tech.



## Featured Hacks



We gave away

# \$43,410

In prizes this year!

Total  
Projects Submitted

# 215

Total  
Prize Categories

# 23

# of Participants that  
Submitted a Hack

# 854

### A few of our favorite winning hacks...

#### WaqiBot

*Best Data Visualization Tool - Qualtrics*

*#hackislamophobia - Fifth Tribe/America Indivisible*

WaqiBot is a social justice warrior that fights Islamophobia in realtime in Discord servers utilizing machine learning. It also combats Islamic misconceptions by teaching users about the Qu'ran.

#### Healthline

*Best Global Health Hack - Abt Associates*

Healthline provides a plethora of useful resources for health care workers such as discussion forums for workers to connect with one another, real time live updates on COVID-19 cases around their area and on an international scale, and mental health resources. Healthline is a mobile application created using ReactNative to provide resources for workers in developing areas.

## Featured Hacks

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### A few of our favorite winning hacks...

#### Cyan

*Best Hack to Build a "Smart" Tech Hub Ecosystem - M&T Bank*

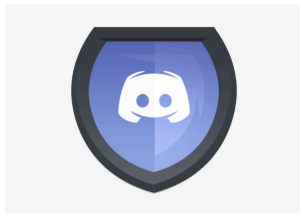
Cyan is an inclusive and health-conscious, chrome browser extension targeted at users who spend a maximum amount of time in front of their computer screens. It leverages the power of machine learning to monitor a user's posture in real-time while also providing contextual feedback and corrective measures.

#### Min

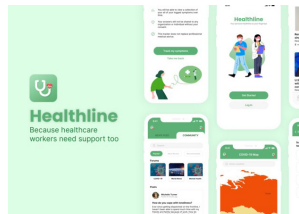
*Best Hardware Track Hack*

Hacker Jiamin Deng built the Min instrument using an Arduino board, ultrasonic sensor, and buzzer. Inspired by the instrument theremin, min sounds different notes depending on the users distance to the sensor. Checkout her musical hack [here](#).

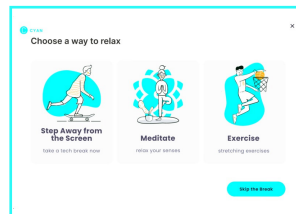
### Devpost Gallery



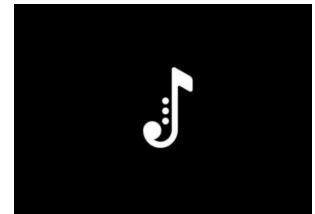
WaqiBot



Healthline



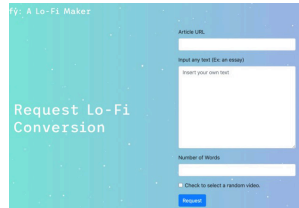
Cyan



Min



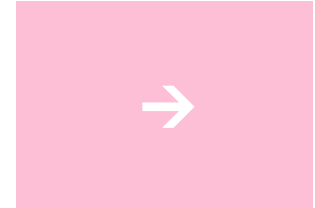
JAAN



Convertify

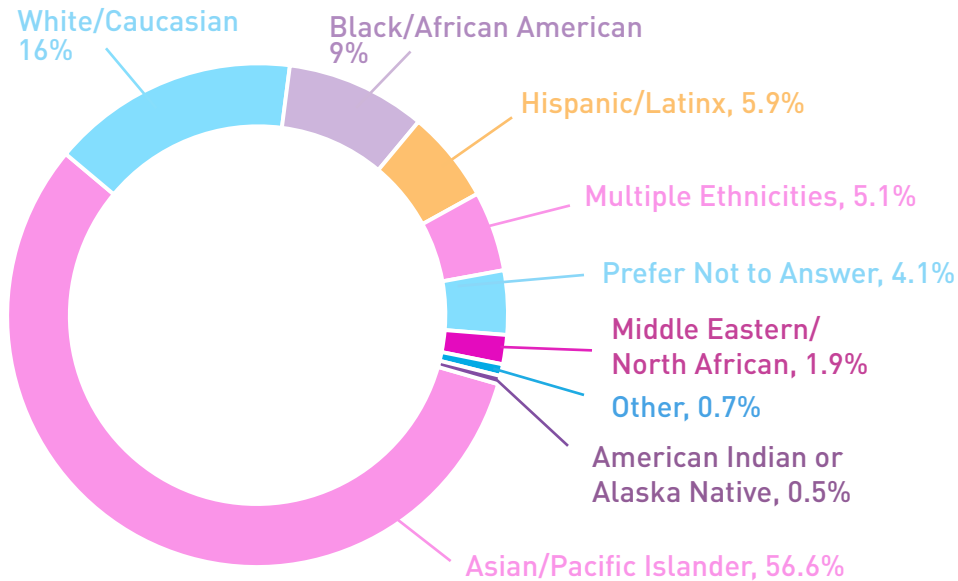


Smile.y

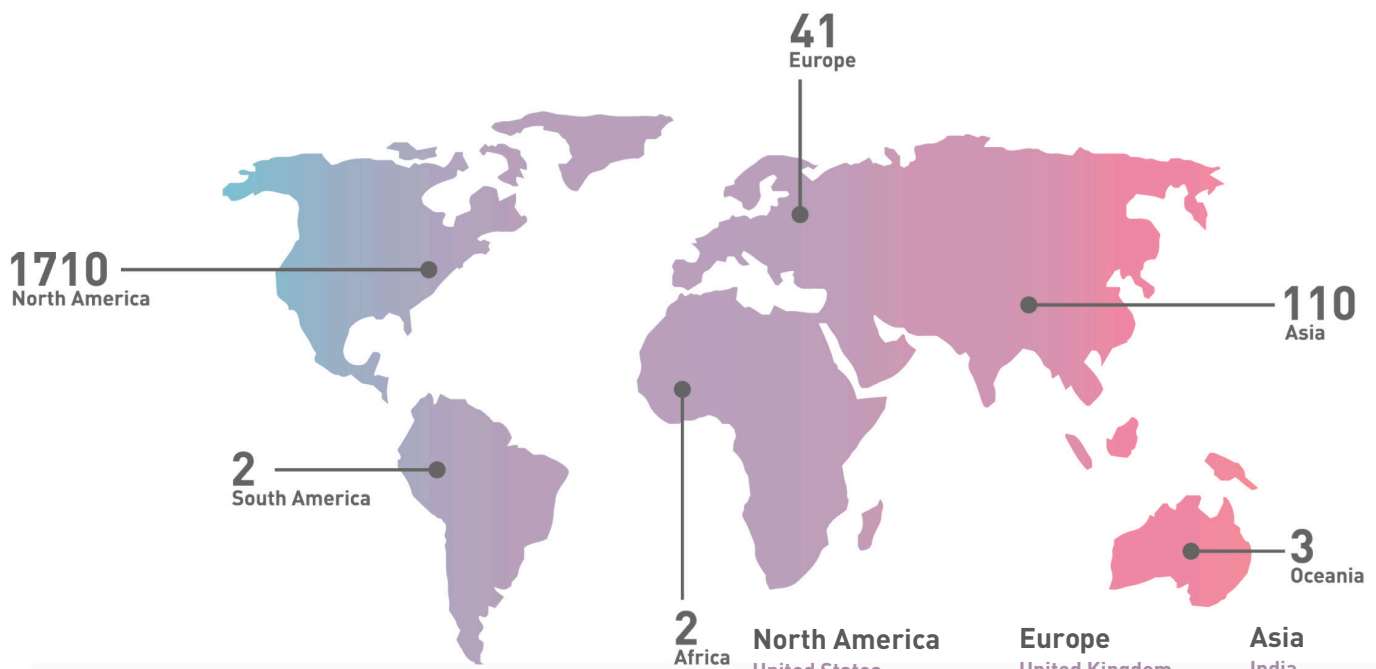


Visit our Devpost

## Global Representation



## Race & Ethnicity



## Hackers from 6 Continents!

### North America

United States  
Canada  
Mexico  
Dominican Republic

### Africa

Tunisia

### Oceania

Australia

### South America

Ecuador  
Brazil

### Europe

United Kingdom  
Germany  
Spain  
Italy  
Portugal  
Serbia  
Greece  
Finland  
Slovenia  
Lithuania  
Switzerland  
Ireland (Republic)  
Latvia  
Turkey

### Asia

India  
China  
UAE  
Indonesia  
Vietnam  
Singapore  
Taiwan  
Malaysia  
Saudi Arabia  
Korea South  
Philippines  
Nepal  
Thailand  
Cambodia



### **Technica Broadens Its Horizons**

"The online format hasn't seemed to hinder the enthusiasm of participants who have registered in record-high numbers. Nearly 2,700 people have signed up to participate, roughly tripling attendance in a normal year." — Maryland Today



### **Technica channels inclusivity in virtual hackathon for women and non-binary students**

"Far from putting a damper on festivities, though, moving online allowed the competition to balloon in size, even further expanding from last year."

— The Diamondback



### **Technica 2020 Empowers Women Virtually**

"In addition to juggling the switch to a virtual platform, Technica is adding two new tracks for this year's event — one for hardware-based projects and one for beginners. The beginner track is a way for first-time hackers, who made up about 80% of Technica 2019's attendance, to "meet each other in a smaller group settings"

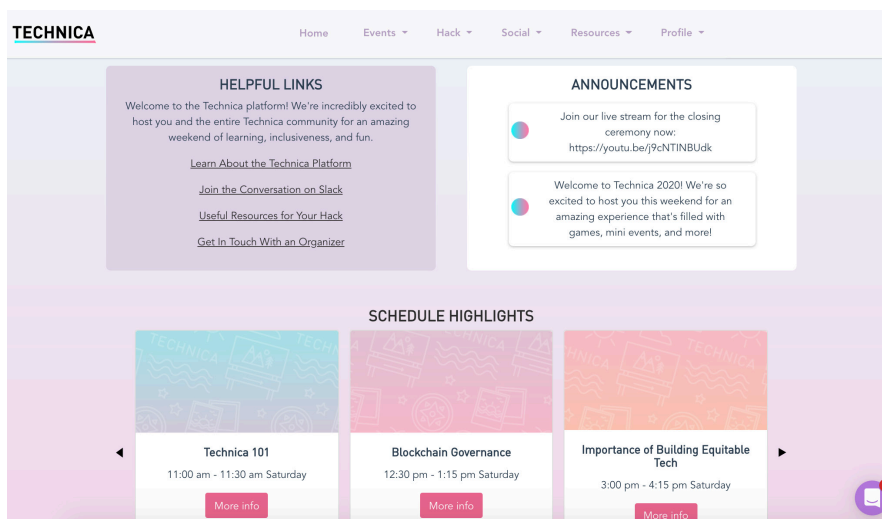
— Her Campus

## Virtual Platform

Our unprecedented shift to a completely virtual event format this year also necessitated unprecedented technology challenges. We evaluated many existing online venue services when planning our event this year, and ultimately concluded that using a pre-built system would drastically diminish the standard of the event since they're not made for hackathons. Instead, we made the bold decision to build our own custom event platform from scratch to support our event and ensure that participants would still experience the magic of Technica despite the virtual format.

The Technica virtual platform leverages multiple best-in-breed technology solutions in order to provide a world-class virtual event experience for all attendees. These include an intuitive registration and login system, an embedded schedule, and support for dozens of amazing virtual workshops, games, and meetups. The platform also provides dozens of completely custom, hackathon-specific features that delight hackers, such as seamless mentorship request functionality, a custom sponsorship fair, and dedicated virtual spaces for hackers to collaborate with their team.

The Technica platform was able to support thousands of hackers, mentors, sponsors, and other attendees this year, in order to ensure they had an outstanding experience throughout the entire weekend. Our platform is completely open-source and will be generally available soon for other hackathons and organizations to use. To learn more about the platform or to use it for your hackathon, please reach out to [tech@gotechnica.org](mailto:tech@gotechnica.org).



# The Team

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# The Team

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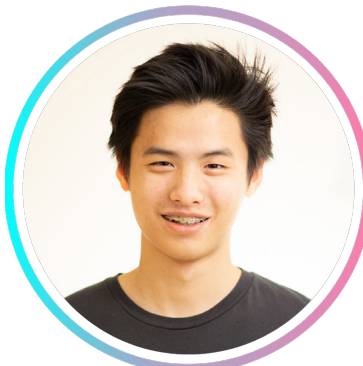
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# Our Supporters

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DEPARTMENT OF  
COMPUTER SCIENCE



A. JAMES CLARK  
SCHOOL OF ENGINEERING



UMIACS  
University of Maryland Institute for Advanced Computer Studies



COLLEGE OF  
COMPUTER, MATHEMATICAL,  
& NATURAL SCIENCES



DEPARTMENT OF  
ELECTRICAL &  
COMPUTER ENGINEERING

**T.RowePrice®**  
INVEST WITH CONFIDENCE

**BANK OF AMERICA**



**M&T Tech**



**Qualcomm**



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WOMEN IN COMPUTING

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**NS2 WIN**  
WOMEN'S INITIATIVE NETWORK

**TRAVELERS**



**Microsoft**

**Capital One®**



**leidos**

**Appian**



**Combinator**



**Dropbox**

**VISIONIST INC.**



**shopify**



COLLEGE OF  
BEHAVIORAL &  
SOCIAL SCIENCES



startup shell



**MLH**  
MAJOR LEAGUE HACKING

## Connect with Us

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## Every Donation Counts

Individual contributions also make a huge impact — we appreciate all levels of support!

**\$20**

The cost to provide electricity and internet to a hacker, so they can stay charged up and logged in all weekend

**\$10**

The cost of each meal we provide to hackers at Technica, keeping them fueled and properly fed

**\$5**

The cost per hacker to keep Emergency Medical Services and Security Personnel on hand throughout Technica weekend, just in case