

**POST-CONFERENCE
RESOURCE
GUIDE**

**SHOULD WE
HACK
HUMANITY?**

**2022 ETHICS & LEADERSHIP
CONFERENCE**

**@WEARESPARKNC
WWW.SPARKNC.ORG**

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SHOULD WE HACK HUMANITY?

2022 ETHICS &
LEADERSHIP
CONFERENCE

Introduction

The 2022 Ethics and Leadership Conference: "Should We Hack Humanity?" (ELC 2022) was presented as an in-person and virtual event on the Durham Campus of the North Carolina School of Science and Mathematics (NCSSM) in partnership with SparkNC. The purpose of the conference was to engage 9th- through 12th-grade students from across North Carolina in the emerging conversation about ethics in high-tech fields.

Ideas that were the stuff of science fiction a generation ago are shaping reality today. Engineers can use artificial intelligence to reduce car accidents, make surgeries safer, and prevent acts of violence. Robots can transform work. Scientists can edit human genes to avoid diseases and disorders, extend lifespans, and enhance athletic ability and IQ.

But just because we can harness the potential of technology in these ways, does that mean we should? If we do, what will be the consequences—good and bad—for fairness? For privacy? For democracy? Humans have the power to shape the future of technology in ways that are responsible, ethical, and humane. But we could also do the opposite.

Students at the event:

- Networked with other students and tech industry professionals,
- Participated in problem-solving sessions and discussion about ethical tech,
- Heard from experts about ethical dilemmas in their fields, and
- Learned about exciting career paths in high-tech.

About this Guide

This guide provides links to videos of the ELC 2022 conference plenary sessions, discussion guides for each video, and additional resources to extend learning about ethics in technology, with a focus on artificial intelligence. Students can explore and access many of these resources without the need for an educator to lead. For educators, this guide provides easy-to-implement activities, lessons, and content to extend learning.

SHOULD WE HACK HUMANITY?

CONFERENCE VIDEOS AND RESOURCES

Recordings of each of the plenary sessions of the 2022 Ethics and Leadership Conference: "Should We Hack Humanity?" are available on a [YouTube playlist from NCSSM](#). Video links, descriptions and accompanying educator guides with lesson ideas and additional resources are on the next page. They are also available at sparknc.org.

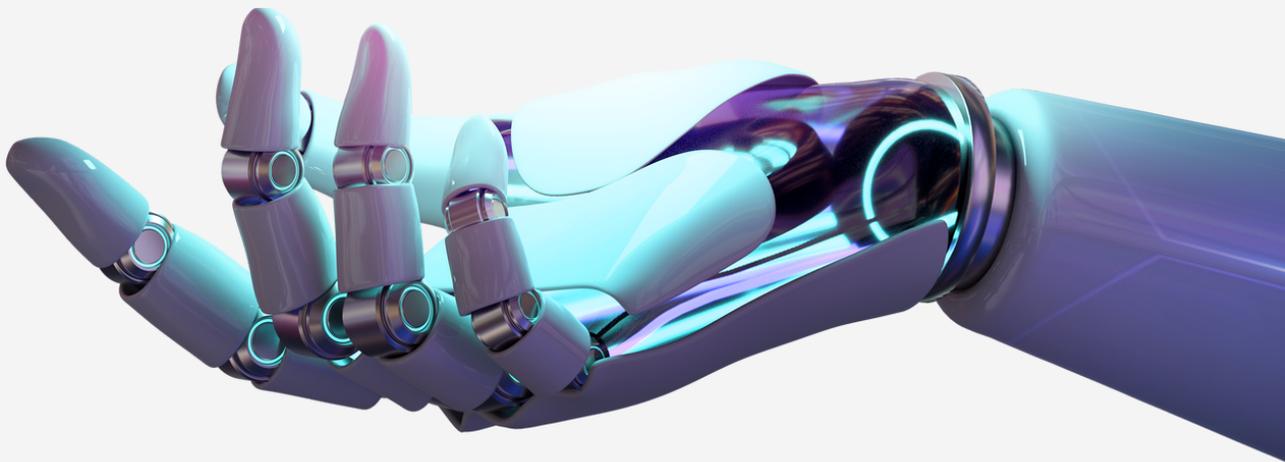
Sessions include:

- HumAI: Empowering Inclusion with Technology by Noelle Silver Russell
- AI in Your Neighborhood with Renee Cummings
- AI in the Exam Room: Corporations and Government Have Your DNA with Charlotte Dungan
- Hands On: Tools for Creating with AI Tech with Charlotte Dungan
- What's Next?: Tech Talent Share their Journeys

POST-CONFERENCE RESOURCES

These resources range from one-off articles on which you can build a lesson in your classroom to fully-formed digital courses and curricula. All of these resources are free. Some are teacher-focused, but students may be able to use many of them without help.

Be sure to check out the Quick Links at the end of this document for more resources!



CONFERENCE RECORDINGS

HumAIIn: Empowering Inclusion with Technology

Noelle Silver Russell kicks off the ELC 2022 conference by sharing how her own personal background and story pushed her to help build more inclusive technologies. Additionally, she speaks about some of the unintentional consequences of building a popular, AI-powered, household technology.

[Video Link](#) | [Discussion Guide](#)

AI in Your Neighborhood

Renée Cummings discusses her varied career path before she landed on the study of justice, privacy, and technology. She advocates for the importance of interdisciplinary perspectives as society moves towards a new, technological frontier. Noelle and Renée sit down to take questions from high-school students and explore answers to questions such as "how do you realistically view the future of technology and how does that concern and excite you?"

[Video Link](#) | [Discussion Guide](#)

AI in the Exam Room: Corporations and Government Have Your Data

Charlotte Dungan explores questions surrounding the intersection of technology, medicine, and ethics. In doctor's offices, AI tools are recording your visit. If you take a vacation to Disney World, they collect your fingerprints to access the rides. At-home DNA testing and newborn genetic screening results in the government and for-profit companies keeping your genetic information. This session helps students consider who has access to our bodily data, what they can do with it, and why we should care.

[Video Link](#) | [Discussion Guide](#)

Hands On: Tools for Creating with AI Tech

Charlotte Dungan introduces a variety of artificial intelligence music, art, and writing tools and walks students through how to use them and explore the ethical considerations related to their use.

[Video Link](#) | [Resource Guide with Tool and Article Links](#)

What's Next: Tech Experts Share Their Journeys

Noelle Silver Russell, Renée Cummings, and Charlotte Dungan speak about their individual paths to careers in tech, including their own challenges and how they chose to overcome them. They speak about their "bad days" and what they learned from them. And they share encouragement for others who are not sure they should be in high-tech fields to, "join the party."

[Video Link](#) | [Discussion Guide](#)

CONFERENCE SPEAKERS



Event Host

Noelle Silver Russell

Noelle Silver Russell was the Keynote Speaker and the emcee for the day. Noelle spoke to students about her personal career journey and dug into the ethical dilemmas she sees in the use of Artificial Intelligence.

Noelle is a multi-award-winning technologist and entrepreneur who specializes in advising companies on emerging technology, cloud, AI and Web 3.0. She has led teams at NPR, Microsoft, IBM, and Amazon Alexa, and is a consistent champion for public understanding of the ethical use of AI and tech based on her work building some of the largest AI Models in the world.

She is the founder of AI Leadership Institute and serves as an executive at IBM. She was recently awarded the Microsoft Most Valuable Professional award for Artificial Intelligence as well as VentureBeat's Women in AI Responsibility and Ethics award.



CONFERENCE SPEAKERS



Event Speaker **Renée Cummings**

Renée Cummings shared her nontraditional career journey into AI and Data Science and how that pathway informs her work in justice and the use of an "interdisciplinary imagination" to better ensure more equitable justice system outcomes.

Renée is an Artificial Intelligence (AI) ethicist and the first Data Activist in Residence at the School of Data Science, at the University of Virginia. She is also a criminologist, criminal psychologist, therapeutic jurisprudence specialist and a Community Scholar at Columbia University

Renée is celebrated as one of the world's leading women in AI and is committed to using AI to empower and transform, helping governments and organizations navigate the AI landscape and develop future AI leaders.



CONFERENCE SPEAKERS



Event Speaker **Charlotte Dungan**

Charlotte Dungan presented a lecture on the intersection of medicine, technology and privacy and led another session exploring Artificial Intelligence tools for the creation of art currently available online.

Charlotte is Chief Operating Officer at The AI Education Project, manages aiEDU's Implementation and Operations teams, focusing in particular on organizational strategy, vision, metrics, finance, compliance, partnerships, and engagement with educators.

Charlotte was the AI Program Architect at AlforTeachers.org including AI PD for educators, standards aligned K-12 curricula with integrated AI, in-person training opportunities, and a space for a supportive online peer community.



CURRICULUM RESOURCES



aiEDU
The AI Education Project

The AI Education Project

This resource is created for teachers by teachers (and our amazing speaker, Charlotte Dungan). If you have plenty of time and freedom, there is a 9-week curriculum with 36 lessons, slides, and a student workbook. If you have less time, you can access 180 interdisciplinary warm-ups.

<https://aiedu.org/>



**AI for
Teachers**

AI for Teachers

Funded by the Ryden Institute at the North Carolina School of Science and Mathematics (NCSSM), this site includes high-quality teaching resources (digital courses, activities, online tools, etc.), teacher professional development eligible for CEUs, and 3 full, interdisciplinary course curriculums.

<https://aiforteachers.org/>



AI4ALL

A non-profit organization, AI4ALL's goal is to bring AI education and learning to a diverse student population. The Open Learning Curriculum is a standards-aligned, interdisciplinary AI curriculum. The site also offers digital demos for professional development.

<https://ai-4-all.org/open-learning/>

CURRICULUM RESOURCES (CONT.)



AI4K12

AI4K12 is developing national guidelines for AI education. They include progression bands for K-2, 3-5, 6-8, and 9-12 and are currently seeking feedback from educators and others in the AI community to ensure they are meeting learners' needs. Additionally, AI4K12 includes links to instructional resources for educators.

<https://ai4k12.org/>



IBM Skillsbuild

IBM Skillsbuild offers a large library of courses for high-school students, college students, and adult learners. Additionally, they have resources specifically for high-school and college educators. Offerings include Artificial Intelligence, Quantum Computing, and Cybersecurity among others.

<https://skillsbuild.org/>



TRAIN, The Coding School

TRAIN, an initiative of The Coding School offers a Summer Intensive PD for Educators (stipend provided) and a virtual Introduction to Machine Learning Course for high-school students. Additionally, they are seeking educators interested in teaching a credit-bearing, fully-funded Introduction to Machine Learning course at their schools.

<https://the-cs.org/train>

CURRICULUM RESOURCES (CONT.)



Road Trip Nation

Do you have students who are confused about what they want to do with their lives? This resource leads students through a process to help them find the answer. Rooted in a rich documentary archive, this short course asks students to consider who they are, what they want, and pushes them to find and interview a professional in an interesting field.

<https://roadtripnation.com/experience/course/rtn/overview>

*In addition to the course, Roadtrip Nation shares dozens of free documentary films of young people interviewing professionals in their fields of interest. The Roadtrip Nation film library includes several roadtrips about high-tech fields such as: cybersecurity, computer science and coding.



Center for Humane Technology

Foundations of Humane Technology is a free, self-paced, six-module course. Though it is intended for adult-learners, upper-level students will be able to engage.

<https://www.humanetech.com/course>

[Center for Humane Technology]



AI For Educators

Noelle Silver Russell offers a course for educators with the goal of increasing AI literacy for everyone through the [AI Leadership Institute](#). There is a student and educator course available for a yearly subscription.

<http://bit.ly/aiforeducators>



INDIVIDUAL LESSON RESOURCES



Experiments with Google

Experiments with Google

This resource is a library of experiments from Google including AI Experiments and Experiments for Learning. Some include a video or lesson plans, and all of them include a way to participate.

<https://experiments.withgoogle.com/>



RAISE

(Responsible AI for Empowerment and Education)

RAISE is an initiative through MIT. Currently, the more in-depth units are aimed at middle-schoolers. However, there are some fun resources that could be used for a lesson or short project in high school classrooms, such as Facemesh Camera Filter, where students explore filters they see on social media. *Some of the resources on RAISE are lessons, but some of them link to research papers written ABOUT projects that took place previously.

<https://raise.mit.edu/resources.html>



ONLINE ARTIFICIAL INTELLIGENCE TOOLS FOR CREATING

These tools will help you create music, images, and writing using AI. All of the tools are free or have free components. Thanks to Charlotte Dungan for curating and presenting these tools on the day of the conference.



Images/Art

- [Quickdraw.withgoogle.com](https://quickdraw.withgoogle.com) - A tool for quick sketches
- [Autodraw.com](https://autodraw.com) - Easy to use drawing tool
- [Pinscreen.com](https://pinscreen.com) (or Pinscreen App) - Create a 3D avatar using a selfie
- [Crowdsource.Google.com](https://crowdsource.google.com) - Image labeling to improve Google tools
- <https://discord.gg/midjourney> - Create photorealistic images on
- [Discord openai.com/dall-e-2/](https://discord.openai.com/dall-e-2/) - Create realistic images from a description

Music

- www.vocaloid.com/en/ - Free trial version available
- [Aiartists.org](https://aiartists.org) - Curates AI art and AI art tools

Writing

- deepai.org/machine-learning-model/text-generator - Generate text from a prompt

Computer Tutorials (not AI)

- www.w3schools.com - Learn everything about computers

INDIVIDUAL ARTICLES AND VIDEOS

This is a short list of articles and videos on which you can build a classroom lesson or discussion.



Articles

- **[775 Years After India's Violent Partition, Survivors Can Cross the Border - Virtually - NPR](#)**
 - Survivors are able to see their homes after 75 years, trauma-informed ethics
- **[Amazon's Dangerous New Acquisition - The Atlantic](#)**
 - Amazon bought Roomba vacuums and may use them for surveillance
- **[The Unpleasant Surprises of Genetic Ancestry Testing - El Pais English](#)**
 - Finding new relatives, using data to solve crimes
- **[Dairy Farmers Are Turning to an AI System to Track Cows' Health - Newsela](#)**
 - Tension between instinct and AI in agriculture
- **[WRAL Investigates Whether ShotSpotter Technology Impacts Violent Crime](#)**
 - ShotSpotter Technology in Durham, NC
- **[Taylor Swift Will Always Be Bigger than AI - Bloomberg US](#)**
 - Limitations of AI on arts and culture
- **[Police Are Using DNA to Generate 3D Images of Suspects They've Never Seen - Vice](#)**
 - Use of DNA to estimate suspects' physical appearances

Videos

- **[AI Generated Art Piece Takes First at the State Fair - Next9 News \(NBC\)](#)**
 - Can AI art be considered "real art"?
- **[How China is Using Artificial Intelligence in the Classroom - Wall Street Journal](#)**
 - Using electrode headband to measure and track student focus
- **[Biologist Explains CRISPR in 5 Levels of Difficulty - WIRED](#)**
 - Teen (01:26-03:03) and Undergrad (03:05-04:48) appropriate for most students.
 - Grad Student (04:48-07:17) is more technical but really digs into ethics.
- **[Police Tapping Into Ring Doorbell Video](#)**
 - Police are using footage from ring doorbell cameras to solve crimes

SHORT-TERM OPPORTUNITIES



Betabox Learning

Betabox Learning offers on-site field trips to schools. Students can engage with a wide variety of high-tech options, such as 3D printing and drones. Additionally, Betabox offers kits educators can check out to bring resources to their classrooms for 3-weeks and online lessons on a variety of tech-related topics. Title 1 schools can apply to access kits and field trips for free.

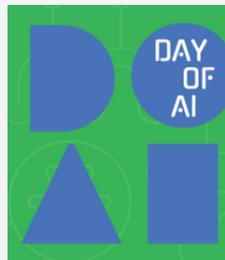
<https://betaboxlearning.com/>



Day of AI

Day of AI is a K-12 virtual conference through MIT RAISE. Dates for a Spring 2023 conference have not yet been announced.

<https://www.dayofai.org/>



The 2022 Ethics & Leadership Conference

SHOULD WE
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Quick Links:

- **Educator Prep Guide**
 - with intro lessons on AI and Ethics
- **Conference Video Playlist**
- **Discussion Guide Packet**
- **Additional Resources**



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and Mathematics