SPOTLIGHT ON
Artificial Intelligence for Social Change

The Burnes Center for Social Change is working on several transformational projects and initiatives aimed at leveraging the power of Artificial Intelligence (AI) to make impactful change in the world. As the fastest growing technology in history, AI tools have an underused potential to advance positive change and help solve difficult public problems.

AI for Impact: Social Change through Technology

This fall, the Burnes Center has partnered with Northeastern’s Khoury College of Computer Science to offer a sold-out, 4-credit course: “AI4 Impact: Social Change through Technology.”

Led by Professor and Burnes Center Director Beth Simone Noveck, Burnes Center Fellow Henri-Hammond Paul, and NuLawLab Director Dan Jackson, the course empowers students to leverage generative AI tools to tackle real-world challenges that strengthen democracy, enhance education, and improve government services.

Under the guidance of experienced practitioners, students collaborate in teams to develop and deploy these solutions, gaining hands-on experience and understanding the practicalities of emerging AI techniques. The immersive course emphasizes human-centered product and project management skills, while promoting fairness and equity in using generative AI for positive social change.

This semester students are working to:

• Improve the ability of low-income families to apply for and receive federal broadband benefits with Stacey Abrams and Fair Count.

• Support families to negotiate their student’s Individualized Education Plan with Innovate Public Schools.

• Improve constituent communications with the United States Congress with the PopVox Foundation.

• Help the Museum of Science Launch an AI-enabled online engagement on literacy, AI and equity.

Projects

<table>
<thead>
<tr>
<th>AIEP</th>
<th>AI and Equity Conversations</th>
<th>AI-EP</th>
</tr>
</thead>
</table>
| INNOVATE PUBLIC SCHOOLS/AI-EP | MUSEUM OF SCIENCE | Creating a generative AI product to aid families with students with Individualized Education Plans (IEP).
| | Using generative AI to support a public conversation about AI, equity and learning with the Museum of Science in Boston. |
| | Mentors: Fahad Dogar and Sofia Bosch Gómez |

<table>
<thead>
<tr>
<th>Affordable Connectivity, Accessible Connectivity</th>
<th>Reimagining Congressional Civic Engagement</th>
</tr>
</thead>
<tbody>
<tr>
<td>FAIR COUNT</td>
<td>POPVOX FOUNDATION/THE GOVLAB</td>
</tr>
<tr>
<td>Developing a generative AI tool to accelerate adoption of federal broadband benefits.</td>
<td>Supporting the Administrative Office of the United States House of Representatives to more effectively use AI for citizen engagement.</td>
</tr>
<tr>
<td>Mentors: Cory Ondrejka, Henri Hammond-Paul</td>
<td>Mentors: Marci Harris and Dane Gambrell</td>
</tr>
</tbody>
</table>
**Burnes Center Mentors**

**Cory Ondrejka** recently joined the Burnes Center as a Senior Fellow. He serves as a project mentor in the Burnes Center AI4Impact Class. He previously was the Vice President of Product Management at Google, where he led the Core Experience team, responsible for improving the product experience across all of Google’s products, including design systems, front end systems, AI experience infrastructure, metrics, identity, internationalization, equity, and accessibility. In addition, he was a Technical Advisor to the CEO, where he took on various special projects and focuses on delivering high performance culture at scale. During his tenure, his teams delivered an entirely new user experience for Google products in Material You, multiple cutting edge Generative AI experiences, and transformed foundational technology depended on by billions of people.

He has previously worked for Meta as VP Mobile, where he transformed Meta from a company that handled mobile experiences as the exception to one where mobile is the foundation of the company, and was the co-creator and founding Chief Technology Officer of Second Life, the pioneering virtual world.

**Fahad Dogar** recently joined the Burnes Center as a Senior Fellow and serves as a project mentor in the Burnes Center AI4Impact Class. He is an associate professor of computer science and a senior fellow for civic technology at Tufts University. Before joining Tufts, he was a postdoctoral researcher in the systems and networking group at Microsoft Research UK. His research interests span the broad areas of networking, distributed systems, and technologies for social impact. He has published at top venues in computer systems and networking (e.g., ACM SIGCOMM, Usenix NSDI, etc) as well as in HCI and accessibility (e.g., ACM CHI, ACM CSCW, ACM ASSETS, etc). His teaching at Tufts includes a course on computing for developing regions which focuses on understanding the challenges and opportunities of using various technology-based interventions in low income communities. Dogar completed his Ph.D. at Carnegie Mellon University and his B.Sc. from LUMS, Pakistan. His awards include a VMWare Early Career Fellowship, Facebook Faculty Fellowship, and a gold medal from the President of Pakistan for being the top computer science student in his undergraduate cohort.

**Additional Mentors**

**Róbert Bjarnason** is a serial entrepreneur who founded the first Internet companies in Iceland in 1993 and in Denmark in 1995. In 2008, he established the nonprofit Citizens Foundation to enhance decision-making in democracy through civic tech. Before this, he worked in the gaming industry in San Francisco and London, where his teams won multiple awards, including BAFTAs in 2004 and 2005. He developed Agent Ruby, in 2001, for artist Lynn Hershman, one of the oldest still operating AI chatbots, which is a part of the permanent collection at SFMOMA.

**Marci Harris** is CEO and cofounder of POPVOX, a nonpartisan platform for civic engagement and governing, and Director of the nonprofit POPVOX Foundation. She developed the concept for POPVOX while working in Congress as counsel to the chairman of the House Ways and Means Health Subcommittee, and worked on the House “Tri-Com” team that drafted the Affordable Care Act. She serves on the board of LaunchTN and was a fellow with the Harvard Kennedy School’s Ash Center for Democracy (2016), New America California (2017), and an affiliated scholar with the CITRIS Policy Lab at UC Berkeley. In 2018, she led a team with the People-Centered Internet that developed recovery recommendations for the government of Puerto Rico. As a member of the American Political Science Association’s Presidential Task Force on Congressional Reform, she co-wrote “Tech and Innovation” recommendations to the House Select Committee on the Modernization of Congress and has testified several times before the committee. She holds a B.A. from Franklin University Lugano, Switzerland, a J.D. from the University of Memphis and an LL.M. from the American University Washington College of Law.

---

**KEY STATISTICS:**

- 25 students working on real world generative AI projects
- 8 seasoned mentors, including the former tech advisor to the CEO of Google and the CEO/President of Citizens.is
- 4 client projects
Launching the AI4Impact Co-op Program: “Product-Based Learning” for the AI Age

Building on the work of this semester’s AI4Impact course and in collaboration with the Office of Massachusetts Governor Maura Healy and the Khoury College of Computer Science, the Burnes Center’s AI4Impact Co-op Program blends academic learning with practical fieldwork as students collaborate with governmental, nonprofit, and civic organizations over the course of six-months to address real-world challenges using generative AI.

In this “product-based learning” program, student teams will be guided by professional advisors to enable them to design and implement solutions to complex problems. They will learn to use technology to become powerful agents of change with the skills to deliver transformative innovations in collaboration with communities.

Housed at the Burnes Center for Social Change, this first-of-its-kind program will formally launch in January 2024. Northeastern co-ops will be supervised by professional staff, working on AI products for clients like the Commonwealth of Massachusetts that will improve the lives of the most vulnerable.

KEY STATISTICS:

- 20 Coops for Spring 2024
- Engaged in generative AI projects for the Commonwealth of Massachusetts, City of Boston, and other clients.
- Students learn how to design and deliver a real-world project with impact.
To advance the Burnes Center’s goal of strengthening democracy and improving governance and problem solving, the Center houses InnovateUS, a free training initiative that uses new technology to deliver at-your-own pace and live skills training to public servants in areas such as data, digital, and community engagement.

Supported by grants from Google.org, The Henry Luce Foundation, and The Rockefeller Foundation, InnovateUS is the only problem-solving training program created for and by public servants. InnovateUS delivers on the Burnes Center’s commitment to strengthening democracy and improving governance through increasing the capacity of the public workforce to tackle real-world problems more effectively and legitimately.

Over the past 6 months, InnovateUS has hosted 14 workshops with public policy experts for 1,946 participants from the public sector. In feedback surveys, 96% of respondents said that they would recommend the training to a friend or a colleague and 86% said that they are likely to use what they learned at work.

Here’s what our participants had to say about the trainings:

“Such a great topic and incredibly powerful presentations as well as follow up questions.”

“Our agency is actively asking for our recommendations and these are very practical.”

“Real world application and with the necessary tools and back office assistance.”

“It was engaging, and the theory was accompanied by multiple examples.”

“This was so informative. Excellent information with the presentation moving at the right pace. Kept me interested and caused me to think. What are we doing? What do we still need to do?”

“It was inspiring and practical at the same time.”

“Very timely topics and subject matter and discussion are highly relevant to and insightful for a cross-discipline group of my colleagues.”

Congratulations

Congratulations to Burnes Center Director Beth Simone Noveck who was awarded an honorary doctorate from the University of Geneva on October 13, 2023.
Events

Rebooting Democracy in the Age of AI Lecture Series

From September 2023 - May 2024, the Burnes Center is hosting a series of online and in-person conversations with innovative designers, thinkers, and change makers from around the world working to "do democracy" differently. The “Rebooting Democracy in the Age of AI” Lecture Series aims to address how to use new technologies to strengthen democracy through conversations with pioneers working to democratize power in governments, schools, and workplaces. REBOOTDEMOCRACY.AI

2023

OCTOBER 26, 2023, 4 P.M.
Algorithms for Engagement
with Róbert Bjarnason (Citizens Foundation), Colin Megill (Polis), and Ariel Procaccia (Professor of Computer Science, Harvard University)

NOVEMBER 9, 2023, 5 P.M.
AI and the Future of Youth Democracy
an interactive discussion by youth and for youth. Guests to be announced soon.

NOVEMBER 16, 2023, 5 P.M.
Combining Human and Machine Intelligence to Enhance Democracy
with Sir Geoff Mulgan (Professor of Collective Intelligence, Social Innovation and Public Policy, University College London) – Virtual + In-person, Northeastern University Alumni Center

2024

JANUARY 18, 2024, 5 P.M.
From Cyberdemocracy to AI Democracy: How the History of the Internet Could Shape our AI Future
John Battelle (Burnes Center) interviewing Vint Cerf (Chief Internet Evangelist for Google, co-designer of the TCP/IP protocols and the architecture of the Internet)

JANUARY 25, 2024, 5 P.M.
AI and the Media
co-hosted by the Northeastern School of Journalism, with Jill Abramson (the Burnes Center), and Ethan Zuckerman, co-hosted by the (Professor of Public Policy, University of Massachusetts Amherst). – Virtual + In-person, Northeastern University

FEBRUARY 15, 2024, 12 P.M.
AI and Democracy's First Principles
with Sir Anthony Grayling (Professor, New College of the Humanities at Northeastern University, London)

MARCH 21, 2024, 5 P.M.
AI and the Future of the Workplace
with Orly Lobel, author of The Equality Machine: Harnessing Digital Technology for a Brighter More Inclusive Future, and Seth Harris (Professor, Northeastern and the Burnes Center)

APRIL 11, 2024, 5 P.M.
AI for Participatory Planning
co-hosted by the Northeastern School of Architecture, with Damiano Cerrone and Liza Gazeeva (UrbanistAI) and H. Killion Mokwete and Amanda Reeder Lawrence (Professors, Northeastern School of Architecture). – Virtual + In-person, Northeastern University

MAY 16, 2024, 5 P.M.
Artificial Intelligence and the Future of Lawmaking
with Marci Harris (CEO and co-founder of POPVOX Foundation)
Past Events

SEPTEMBER 6, 2023

Food Politics 2023 with Dr. Marion Nestle

The Burnes Center joined the Bouve College of Health Sciences at Northeastern University to welcome Marion Nestle, renowned expert on the politics of food and the connections between agriculture, food, nutrition, and health, for an on-campus discussion. Marion Nestle is the Paulette Goddard Professor of Nutrition, Food Studies, and Public Health, Emerita, at New York University and author of a wide range of books about the politics of food, nutrition, health, and the environment.

SEPTEMBER 13, 2023

Newsroom Confidential: What Role Will the Media Play in the 2024 Election?

Burnes Center Senior Fellow Jill Abramson joined the Northeastern School of Journalism and the School of Public Policy and Urban Affairs for a conversation on where the political and media landscape heading into the 2024 election. The panelists included: John Harwood, former White House correspondent for CNN and columnist for the New York Times and Wall Street Journal; Erika Allen, Washington Post, Head of Audience Strategy and Growth; and John Ellis, former head of the election unit at Fox News.

Over the month of September, the Power at Work Blog interviewed multiple prominent newsmakers and decision makers in the labor movement in recognition of Labor Day. Watch all recent blogcast posts

SEPTEMBER 6, 2023

Power at Work Blogcast #15: An Interview with AFL-CIO President Liz Shuler

President Liz Shuler of the AFL-CIO talks candidly about her earliest organizing experience, and the AFL-CIO’s role in organizing.

SEPTEMBER 25, 2023

An interview with LIUNA President Brent Booker

Brent Booker, newly elected General President of the Laborers’ International Union of North America (LIUNA) speaks about his experience as a third-generation laborer, LIUNA’s history as a union of immigrants and how they are protecting their workforce today, union density and growth, and the future of LIUNA.
IN THE PRESS

A Start-Up’s Alternative to Uber: Employing Its Own Drivers
October 5, 2023—Burnes Center Senior Fellow Seth Harris discusses the Uber and Lyft employment model

Biden Will Join Autoworkers on Picket Line in Michigan, a Historic Move
September 22, 2023—Burnes Center Senior Fellow Seth Harris discussed President Biden joining the UAW picket line

‘If not now, when?: Here’s why the UAW strike may have come at the perfect time for labor
September 19, 2023—Burnes Center Senior Fellow Seth Harris discusses the ongoing UAW strike

Managing the Future of Work Podcast
September 6, 2023—Featuring Burnes Center Senior Fellow Chike Aguh

Episode 4, Chike Aguh
August 29, 2023—Featuring Burnes Center Senior Fellow Chike Aguh

UAW talks: Why the shift to EVs is such a big deal to workers
August 28, 2023—Burnes Center Senior Fellow Seth Harris discusses the shift to EV manufacturing

Five Key Pillars of Biden’s Economic Plan
August 12, 2023—Burnes Center Senior Fellow Seth Harris comments on the pro-union actions taken under President Biden.

Trump’s assault on American justice gives inspiration to authoritarians everywhere
August 6, 2023—By Burnes Center Senior Fellow Jill Abramson

Why the writers’ and actors’ strikes are about more than just Hollywood
July 20, 2023—Senior Fellow Seth Harris discusses the writers’ and actors’ strikes

Can Generative AI Be Used to Apply for a Job?
July 18, 2023—Burnes Center Director Beth Simone Noveck discusses the benefits of generative AI in the hiring process

SAVE THE DATE

Burnes Center Faculty and Staff Retreat
November 15 – 17, 2023 • Boston, MA
Q&A with Cory Andrejka

—Continued from page 4

**BURNES CENTER STUDENTS:** How are you approaching the work with your students?

**CORY:** For me, the most productive way to explore the design space is by actively engaging with real problems rather than pondering abstract possibilities. In our interactions, I hope to explore your actual projects, as I found it invigorating to discuss the broadband project with the team and contemplate how technology could be applied to various aspects of it.

1. In the realm of problem-solving, I follow a straightforward playbook:
2. Understand your current position and the ground truth of the existing reality.
3. Define a clear destination, ensuring alignment with customer expectations.
4. Recognize any path dependencies and constraints.
5. Work the problem backward from the final goal to break it into manageable steps.
6. Leverage the capabilities of large language models while considering their limitations.

A good way to think of Large Language Models (LLMs) is that they are roughly as capable as a high school student. So if you can imagine using a large number of high school students to solve a problem, you might gain some intuition about whether the problem is appropriate for an LLM. It’s crucial to remember that these models are continually improving, and their capabilities are expanding.

On the generative side, tools for creating images, audio, and videos are rapidly advancing. While challenges exist, such as navigating artistic relationships with AI-generated content, the potential for innovation is undeniable.

As computer scientists, you have the flexibility to access large language models via web services, offering various integration possibilities. However, data privacy and regulatory considerations should be carefully addressed.

**BURNES CENTER STUDENTS:** Could you provide insights into the factors that influence your decision to use AI models?
versus relying on your own thinking when developing a project?

**Cory:** I think that AI, as a tool for brainstorming, for triggering ideas, is a really powerful tool for getting you to think differently about it. This isn’t a mode of operation and a mode of thinking that I’ve fully baked into my process yet, but it’s one that is hugely advantageous over not using tools in that way.

You’re unlikely to get a perfect, super complex solution out of any of these models, but you may get something that triggers an idea, right? And the same way that the best part about being in groups is truly critiquing each other’s ideas in a way that challenges the ideas is safe for each other because you’re not critiquing each other. You’re critiquing the idea. What’s great about having a language model in the process is there is no way to hurt the language model’s feelings when you’re critiquing an idea and saying, ‘No, do this differently.’

**Burnes Center Students:** I have a mentor at Google, and we’ve been discussing career planning and what a career in AI might entail. Currently, I work as an intern on an AI team, and I’m the only team member pursuing a bachelor’s degree. Everyone else holds PhDs. My mentor mentioned that breaking into AI without advanced degrees typically involves starting in software engineering roles before transitioning to AI teams, including NLP and machine learning teams. What are your thoughts on this regarding career progression? Do I need to pursue a PhD or postgraduate studies to enter the AI field, or are there alternative pathways?

**Cory:** That’s a really good question, and it’s one that receives various answers depending on whom you ask. I’ll offer my perspective, although I want to emphasize that there’s no one-size-fits-all answer to this complex question.

Let’s start with: What do you want for your career? If your goal is to spend the next several years in academia, perhaps five or even seven years, and you have the capacity and inclination for it, pursuing a Ph.D. in computer science, particularly in the field of AI, can be highly beneficial. This is a shift from about two decades ago when, at least in the United States and in many computer science subfields, Ph.D.s were considered somewhat unnecessary, if not counterproductive. Back then, those five years could have been spent gaining real-world experience and knowledge.

However, AI has evolved, and the situation has changed. AI is a broad field, ranging from deep research at places like Google DeepMind, where you’re pushing the boundaries of transformer models, requiring significant mathematical and research skills often associated with Ph.D. work, to startups where individuals with undergraduate degrees are actively using large language models and generative AI to tackle practical problems.

So, one aspect to consider is which part of AI excites you the most. Do you aspire to publish groundbreaking research papers, potentially becoming a researcher who bridges academia and industry? If so, a Ph.D. may be a clear path for you. On the other hand, if you’re more enthusiastic about using AI to create impactful products and solutions that can change the world in the short term, you might not need a Ph.D., and your undergraduate degree may suffice.

It’s worth noting that different companies have varying biases regarding the educational backgrounds of their research teams. Companies like Google tend to have a high proportion of Ph.D. holders, while others, such as Microsoft’s AI team and Meta’s (formerly Facebook’s) AI research groups, employ a more diverse mix of educational backgrounds. OpenAI is also an example of a place with a significant number of non-Ph.D. team members.

Furthermore, there’s a third path: you can work in research teams without obtaining a Ph.D. While some will insist that a Ph.D. is the only way to research, it’s essential to recognize that there are alternatives.

In conclusion, AI is a field with a wide range of academic paths, including non-computer science avenues. There are also opportunities to use AI effectively without extensive programming knowledge. Additionally, fields related to ethics and equity in AI draw expertise from various backgrounds beyond computer science and mathematics. So, in your pursuit of a career in AI, consider your passions and aspirations, and keep an open mind about the diverse paths available to you.

**Burnes Center Students:** I’ve recently started exploring the use of GPT-4 to enhance coding and computer science projects. I’m interested in your perspective on the future of using generative AI in software development. Specifically, what skills are
likely to become crucial, and how do you envision the role of a software engineer evolving in the coming years? It seems that many of the skills we traditionally learn, especially in the initial years of our degree or in software engineering boot camps, are becoming replaceable by GPT-like capabilities. I’m curious about how this might encourage software engineers to think differently, perhaps at a higher level, and what the software engineering landscape might look like in the near future.

Cory: Computer science is not typing, but for the past 40-50 years it has been associated with typing. This paradigm is undergoing a profound shift. The current AI transformation is poised to be as impactful as the Industrial Revolution. While this might sound like a bold claim, it’s evident in the capabilities of the current generation of AI models.

AI is enabling people worldwide to create interactive and intelligent technology that can perform a wide range of tasks. This shift means that individuals who can think systematically about products and technology are at an advantage. If you can conceptualize and guide AI-driven solutions, you are essentially elevating your capabilities.

This shift does not imply that all computing jobs will vanish. There will still be a need for computer scientists, particularly those involved in creating and improving AI models, chip design, and related fields. However, the traditional notion of coding may no longer be the foundational skill it once was.

This transformation is akin to when calculators became widely available. There used to be a specific skill set for solving complex mathematical problems manually, but calculators rendered that less critical. There will likely be similar debates and adjustments as AI becomes more integrated into various fields.

In this evolving landscape, there’s room for a broader range of learning opportunities within the academic path. As programming becomes less central, students can explore other domains of knowledge, such as psychology, art, or any subject that complements their goals in creating or managing businesses.

The transition to this new paradigm may be challenging and marked by unexpected changes. However, being a student during this transformative period offers advantages. Students are often more agile and open to cutting-edge approaches than established companies with entrenched infrastructures. This AI revolution has the potential to surpass the impact of previous technological shifts like the mobile and internet revolutions, leading to groundbreaking innovations in how we create and operate businesses.

Burnes Center Students: I’m a computer science and political science major, and one of my areas of study has been the ethics of AI and the development of policy in that domain. I’ve also conducted some preliminary research on Google DeepMind. My question is, how can we integrate ethics into our professional practice? Additionally, how do we navigate this era of uncertainty in the realm of technology and its impact on society?

Cory: Comparing your current concerns as a young computer scientist to those of my generation, the ethics of technology and AI weren’t even on our radar 40 years ago. You’re already ahead of the game in considering these issues. To incorporate ethics into your practice, consider thinking about your audience more inclusively and equitably. At Google, I managed teams focused on accessibility, localization, and equity, and this approach can foster productive discussions about accessibility and equity implications.

As you choose companies to work for, scrutinize their public statements and how they’ve addressed ethical challenges. Google, for instance, grappled with ethical concerns before releasing tools like Bard and Palm. Different companies make different ethical choices, so research and ask questions to gauge their stance. Recognize that it’s a complex landscape, and individuals often have agendas.

Consider the role of incentives in your work. If your product’s incentives clash with your ethics, it becomes challenging to prioritize ethics when financial gains are at stake. Incentives wield great power, so it’s crucial to address these tensions early and make informed choices about balancing them. Correcting ethical missteps once a product is widely adopted can be exceptionally difficult throughout history.