

“Everybody Should Have a Fair Share of Technology:”  
How Researchers Conceptualize the Democratization of Artificial Intelligence

## **ABSTRACT**

This project aims to explore how researchers conceptualize and develop artificial intelligence (AI) in ways that incorporate end users. Drawing on semi-structured interviews with researchers who develop artificial intelligence, this project focuses on the value they place on the democratization of AI and the broadening participation in computing. Specifically, this project finds that researchers who develop artificial intelligence think of artificial intelligence as promoting generalized beneficence for individuals and society. While this catchall conceptualization of artificial intelligence seems appropriate, the catchall approach to artificial intelligence risks reproducing exclusion that has historically plagued advanced societies. Thus, to achieve democratization of artificial intelligence, this project concludes that researchers rely on social researchers to develop a contextualized conceptualization and approach that emphasizes how artificial intelligence holds specific value for groups and communities historically marginalized and excluded from the development and deployment of artificial intelligence.

## **PROJECT PURPOSE**

This project aligns with the ICICLE project’s goals in broadening participation in computing. As detailed by the ICICLE project, broadening participation in computing includes several related components. These components include workshops and mentoring, developing paths to marginalized communities, growing competency in bias recognition, and community-based participatory research:

- Years 1-2 activities focus on the ICICLE team itself with workshops and mentoring to establish the culture of the ICICLE team for graduate and undergraduate students, postdocs, researchers, staff, and faculty. Develop paths to marginalized communities.
- Years 2-4 reach the broader ICICLE community and stakeholders. Here, activities include enhancements to degree programs and internships. We grow competency in bias recognition.
- Using Community-Based Participatory Research, we engage the food, agriculture, and animal science communities. The ICICLE Fellows Program welcomes the broader community to contribute to the educational mission.

With these goals in mind, this project aims to expand the understanding of how researchers conceptualize the democratization of artificial intelligence. The present study aims to build on the ICICLE goals while meeting the project objectives. This project sought to meet three objectives:

- Examine the relationships between researchers, artificial intelligence, and artificial intelligence ethics.
- Identify areas for opportunities for researchers who intend to democratize artificial intelligence.
- Enhance our understanding of how to pursue ethical artificial intelligence that bolsters under-resourced communities.

Brandon Alston, PhD  
ICICLE Educational Fellow  
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This project gathered preliminary research to provide nascent insights into how researchers think about artificial intelligence and its role in a democratic society.

## **METHODOLOGY**

This study draws on five semi-structured interviews with researchers who democratize artificial intelligence from various technical expertise. Three researchers were artificial intelligence researchers and developers, one who worked in broadening participation, and another who worked in computing infrastructure. Respondents held different institutional affiliations, such as Historically Black Colleges and Universities (HBCUs), large public universities, and private universities. To protect respondents' identities, I use pseudonyms throughout this report. I also present anonymized versions of quotations.

The interviews posed consistent questions to each participant and provided space to discover unique insights about artificial intelligence. During interviews, respondents answered questions about their direct interactions with artificial intelligence, expectations for artificial intelligence, the factors they considered when developing artificial intelligence, and the purpose of artificial intelligence in the context of their respective fields. The semi-structured nature of the interviews enabled me to probe general and specific respondents' perceptions of artificial intelligence and its purpose within society. As such, this project addressed one research question: How do researchers perceive and understand the purpose of artificial intelligence?

A professional transcription service transcribed the interviews. After listening to the audio recordings and reading through the transcripts, I engaged in open, descriptive, and analytical coding to categorize the perceptions researchers advanced during the interview. This allowed me to identify emergent themes. I discuss one of the most prominent emergent themes in the next section.

## **EMERGENT THEME**

### *Generalized Beneficence*

Interviews revealed several emergent themes. I explore one of these emergent themes in detail to provide deeper insights into how researchers think about the production and purpose of artificial intelligence within American society. Researchers often perceived artificial intelligence as promoting a "generalized beneficence" as offering a solution that remedies social bias. One of the benefits of this view is that researchers see artificial intelligence as benign, neutral, and valuable. However, one of the consequences of this view is that researchers see artificial intelligence as a solution for social bias rather than a site of additional bias.

One of the respondents explained that everyone should have their fair of technology and artificial intelligence. This respondent explained:

Our concern as a scientist is that everybody should have a fair share of technology, no matter what kind of technology. You shouldn't be dictated by large corporations, which is not... At least, it's not our interest in wellbeing. We believe the AI shouldn't be so mysterious or be sounds advanced, like rocket science or nuclear science. It's not.

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ICICLE Educational Fellow  
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This respondent advocates for technology diffusion and claims corporations should not dictate it. While a noble endeavor, the larger social context within which technologies exist remains invisible. As a researcher, this respondent aims to demystify technology for everyone. While technologies can be a source of advancement, they can also facilitate additional bias. Throughout the interview, this respondent avoided acknowledging the potentially detrimental consequences of technologies, in general, and artificial intelligence, specifically. For this researcher and others in the study, technologies were generally beneficial.

## **DISCUSSION AND RECOMMENDATIONS**

This preliminary and exploratory research has revealed that researchers are imagining a collective impact of technologies and artificial intelligence within society. Future research and programming should consider how to move researchers from a collective impact of technologies and artificial intelligence to thinking about targeted impacts within specific communities and demographics. In addition, programming should instruct researchers to consider how technologies have been unevenly developed and distributed throughout society. Finally, including targeted impact will help researchers acknowledge that technologies can exacerbate existing inequalities. Programs and practitioners interested in reaching researchers and developers of artificial intelligence should continue honing researchers' imaginations to see the situated potential of artificial intelligence.

Based on this preliminary research, I recommend that the projects on artificial intelligence include a sociology of technologies workshop for researchers and strategic partnerships with the New Era Alliance.

- Develop a workshop for researchers to consider the sociological impact of technologies alongside their perceptions of the technical impact
- Create a new partnership with the New Era Alliance to solidify another pathway into under-resourced college campuses, researchers, and communities

This preliminary research also demonstrates the need for more research about the people who develop and disseminate artificial intelligence. Thus, to achieve democratization of artificial intelligence, this project concludes that researchers rely on social researchers to develop a contextualized conceptualization and approach that emphasizes how artificial intelligence holds specific value for groups and communities historically marginalized and excluded from the development and deployment of artificial intelligence.