

Project title: Race and Technology Praxis Program

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1) SUMMARY OF KEY FINDINGS/RESULTS

Grounded in the principle that practitioners should play a leading role in shaping the development and use of technologies that impact their communities, the Technology & Racial Equity Practitioner Fellowship supports social sector leaders to work on ideas that advance justice at the intersections of race and technology. The fellowship provides time, space, expertise, financial support, and other resources to help transform ideas into prototypes or action, and to build a cohort of fellows to support ongoing learning, community, and coalition building. Furthermore, the Technology & Racial Equity Practitioner Fellowship links the research and practice of public interest technology by cultivating collaborations between Stanford faculty and community-based practitioners working on the frontlines.

Thanks to the support of the New Venture Fund through the Public Interest Technology University Network Fund Project, in the first year of the program, our practitioner fellows have succeeded in shaping technology policy at the local and global levels through:

- Spearheading a technology and data privacy policy that was adopted by the city of Minneapolis
- Developing international protocols for automated decision-making systems to advance racial and gender justice
- Designing an AI bias discovery tool for use by civil society organizations
- Establishing the Feminist AI Research Network, composed mostly of women from the Global South

In addition to supporting the completion of individual projects led by practitioner fellows, key impacts from this program include:

- Establishing a cohort of social sector leaders addressing racial equity in/through technology
- Hosting a week-long event to develop fellows' projects, establish a supportive cohort, and make connections between fellows and Stanford affiliates
- Arranging monthly workshops with the fellows and affiliated researchers and students for cohort development and skills-building
- Organizing a 2-day virtual Technology and Racial Equity Conference attended by 2,000 people
- Supporting a cohort of undergraduate interns working under the mentorship of the practitioner fellows
- Holding monthly webinars for the public on key issues at the intersection of race and technology

2) BACKGROUND AND PROBLEM DEFINITION

a) What was the project's main objective?

The primary objectives of the Technology & Racial Equity Practitioner Fellowship program are to: 1) build a cohort of practitioners working to advance racial equity through public interest technologies; 2) accelerate practitioners' impact by providing funding and support for community-based projects; 3) connect siloed practitioners and academics.

This program was motivated by the need to center racial justice in the analysis, development, and deployment of new technologies so that they not only do not exacerbate racial inequity but advance racial justice.

b) Who/what are other individuals or institutions working on similar projects?

Several universities offer fellowship programs for practitioners, social sector leaders and others outside of academia that are working on issues related to technology and society, such as the MIT Media Lab, the Berkman Klein Center for Internet & Society at Harvard, and Stanford's own Non-Residential Fellowship at the Digital Civil Society Lab. Prior to launching our fellowship, we consulted with the organizers of related programs (Data & Society, AI Now, Berkman-Klein Center, MIT Media Lab) in order to learn best practices for managing a cohort of practitioner fellows, as well as to ensure that our fellowship filled a gap that was not offered by similar programs. To our knowledge, our program is the only university-based fellowship program for social sector leaders that specifically focuses on technology and racial justice/equity.

c) Did you work with other teams or institutions as partners? If yes, how?

The Technology & Racial Equity Practitioner Fellowship is a joint program between the Center for Comparative Studies in Race and Ethnicity (CCSRE) and the Digital Civil Society Lab (DCSL), and part of CCSRE's new multi-year race and technology initiative. In addition, we have collaborated with other centers on the Stanford campus, such as the Institute for Human-Centered Artificial Intelligence, and the Ethics, Society and Technology Hub.

d) How did you define diversity, equity and inclusion with respect to your work?

We defined diversity, equity, and inclusion from two perspectives. First, the program was designed to advance racial equity through interventions in and through new technologies, as well as educate students in the relationship between technology and critical racial equity issues. The program contributes to DEI at Stanford by creating opportunities for students and faculty to network with practitioners and sharpen the critical tools for understanding the relationship between technology and racial equity. The program advances DEI in the field of public interest technology more broadly by producing racial equity tools that can be shared with the network.

Second, we defined DEI in terms of the composition of the participants and the kinds of relationships that the program fosters among them. The program actively solicited applications from people with historically marginalized backgrounds by communicating directly with organizations based in and led by frontline communities most directly impacted by racial

inequity in the deployment of new technologies. Both CCSRE and DCSL have developed extensive networks of scholars and practitioners from marginalized communities. Through workshops and events, the program has also created opportunities for students, faculty, and practitioners from diverse backgrounds to learn collectively in a supportive environment.

3) DEVELOPMENT

a) How did you first approach the project?

In launching our program, we had the benefit of a campus partner that had successfully run a small fellowship program for two years - the Stanford Digital Civil Society Lab (DSCL). We built on this foundation but added a focus on racial justice and significantly expanded the size of the program, which led to several important qualitative changes. With DCSL we drafted a call for applications, ran a selection process, and hosted a Fellows Week, where each of the fellows could workshop their project with their peers and have opportunities to meet faculty and other stakeholders at Stanford. Fellows were provided stipends and project funds to support their work over the fellowship period.

b) What changes did you make to the project?

The most significant change we made to the project was to extend the fellowship period. Because of COVID-19, each of the fellows' progress was slowed. We had ongoing staff support for the program, so we were able to continue the program for an additional six months with little additional cost. This not only allowed more time for the fellows to make progress on their projects, but it also created an opportunity for cross-cohort interaction. With the extension, the cohort ran from January 2020 through June 2021. We welcomed the next cohort of fellows in January 2021, allowing six months of overlap between cohorts. Fellows from the two cohorts were able to meet during Fellows Week, communicate via a shared listserv and engage with each other at several cross-cohort virtual meetups. In addition, we had planned several research seminars and a summit as part of the program. In a modified form, we were able to host these events virtually. This shift to a virtual format had the fortuitous effect of opening new possibilities for engaging non-local and even international panelists and attendees through these events.

c) How did you evaluate the success of the project?

We evaluated success of the project in two dimensions: the success of individual projects carried out by fellows and the success of our staff at creating opportunities for engagement around technology and racial equity through events and partnerships. Indicators of success for this project therefore included:

1. Project-specific deliverables for each project that advance racial equity in and through technology
2. A collaborative network of practitioners and researchers
3. Racial equity is an issue of central concern for researchers and practitioners doing work related to technology

For the individual projects carried out by practitioner fellows, each project required unique metrics to measure success due to the heterogeneity of project format and goals. Overall, practitioners and projects were selected based on the anticipated impacts that their work would have on advancing racial justice and those impacts were measured using methods appropriate to each project. Moreover, project success was measured primarily in terms of community and policy impacts, rather than traditional academic measures of impact, such as academic publications.

As part of their application to the fellowship, candidates were required to submit a project plan, timeline, and deliverables. One of the key criteria for selecting fellows was the feasibility of their projects and evidence that they had thought through potential hurdles and barriers to success. At the conclusion of the project, we observed that the immediate results and impacts of the individual practitioner fellows' projects depended, unsurprisingly, on the clarity and specificity of the project at the outset, but also the existence of a specific and accessible audience or user for the results of the project.

One fellow sought to create an equity-based city policy on the use of technology in Minneapolis. She began the fellowship with an endorsement from the Minneapolis City Council and had access to key players in the space. Even with a major racial crisis unfolding in Minneapolis in 2020, she and her collaborators were able to develop a policy proposal and it was adopted by the City Council. Another fellow sought to create a learning tool for community organizations to understand and evaluate the implications of technological equity issues for their community. This learning tool was developed, but they did not enter the fellowship with a clearly defined or accessible set of organizations as users. As such, we have yet to see whether there is significant uptake of the tool among community organizations. Another fellow began his fellowship with a project on AgTech, but in much earlier stages, requiring a substantial discovery phase. In addition, his project was based in brokering relationships between two diverse groups but he only had access to one of the groups. The challenges of COVID-19 made this fellow's project even more difficult to complete than it would have been otherwise, because of the food security challenges that resulted from the pandemic. The first year of this program therefore underscored the importance of having an existing audience or network of potential users for the proposed fellowship project. Based on this learning, we adapted our criteria for selecting future fellows, prioritizing applications that identified a clear user-base and demonstrated an existing relationship with their intended audience.

The program should be evaluated in light of longer-term impacts as well. For instance, the fellowship served as a springboard for major shifts into PIT careers for several of the fellows. The program also forged a strong cohort of fellows that collaborated during the fellowship period and continue to collaborate after the end of the program. In addition, the program served as an anchor for a larger Technology and Racial Equity Initiative at Stanford's Center for Comparative Studies in Race & Ethnicity. Because of this anchor program, the Center was able to launch a graduate fellowship program, undergraduate events, curriculum, and engage faculty in a number of ways. With the Technology & Racial Equity Practitioner Fellowship as one of our anchor programs, the Center has begun to catalyze larger institutional change.

In terms of engaging the Stanford campus community and the broader public in issues of technology and racial equity, project success was evaluated through metrics like attendance at events; the number and strength of relationships across campus between engineering, social sciences, and humanities; frequency of repeat engagements between our project and Stanford faculty and students; and satisfaction surveys distributed to the practitioner fellows. We had strong attendance at our monthly webinars and our Technology and Racial Equity conference, was the largest in the Center's history, with nearly 2,000 attendees from around the world.

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5) LESSONS LEARNED

a) How would you summarize your insights?

The first year of the program offered proof of concept that the Technology & Racial Equity Practitioner Fellowship was a viable model and fulfilled a need in the public interest technology space by supporting praxis at the intersection of technology and racial equity. Based on our experience running the first year of the program, we later refined aspects of the selection criteria to ensure that applicants had a well-defined user base for their project concept. While the COVID-19 pandemic introduced some unexpected roadblocks to the project, it also pushed us to create new kinds of virtual programming and community building that will be beneficial for future iterations of this fellowship, which often attracts an international cohort of participants, even after the pandemic subsides. Finally, the first year of the project underscored the importance of faculty involvement; in response, we created a Faculty Advisory Committee to increase engagement and buy-in between Stanford faculty and the work on technology and racial equity at CCSRE.

b) What specific advice would you offer to other members concerning this project?

This project was transformative for our work in the area of technology and racial equity. Participation was also transformative for the fellows in the program catalyzing major career changes, deep relationships among the cohort, and a new network of collaborators. Overall, the project created an influx of people, energy, and ideas in a way that is rare at a slow-moving research institution. However, without a link to the core mission of the university (teaching and research) as well as personnel (faculty and students), such programs can be difficult to sustain. Making these links stronger may be difficult, but important.

c) What specific changes at a departmental or institutional level would have made your project more effective or impactful?

Given that the university had an investment in the grantees as a PIT-UN affiliate, we were surprised at how little institutional support we received. Largely, the university served as a gatekeeper for access to resources, rather than a champion of the work. As our, and PIT-UN's, larger goal is institutional transformation, it would have been valuable to have additional support to raise the visibility of our work at the outset, *before* we had results to show proof of concept. We received the grant, but still had a lot of work to do to garner interest and participation in the work we were undertaking. PIT-UN contracted a communications firm to prepare a press release and other materials, but Stanford was not interested in using this or running a story on the awards. PIT-UN should have made this a condition of receiving funding, not only for the sake of the network, but for the sake of the local grantees and the success of their projects. This would have given us a boost in visibility allowing us to engage faculty and other campus partners better and earlier.

6) POSSIBILITIES TO REPLICATE

a) How can other members replicate the project, or part of the project?

Through the program's public events and communications work, such as the video series and writing for digital platforms, we have created outputs to share with the PIT-UN network and the broader public. Our hope is that this will impact discussions of public interest technology by centering racial equity, as well as highlighting the role of technology in discourse on racial equity.

The Technology & Racial Equity Practitioner Fellowship is a model for collaboration among practitioners, researchers, and students. This model itself is fairly straightforward and can be exported and scaled to other universities in the PIT-UN network. However, there may be limits to scale. Because our fellowship has received applicants from around the world and is not limited to our local area, if other members were to replicate the project wholesale, they would likely attract the same pool of applicants. Efforts could be made to ensure that a similar program would offer some sort of distinctiveness, perhaps by focusing on specific technologies, concentrating on technology and racial equity in a specific geographical region, or exploring how other forms of transformative justice (e.g. anti-colonialism or disability rights) intersect with technology. For instance, selecting fellows that are locally-based could facilitate stronger connections between the fellows and students/faculty. In addition, it would facilitate easier dissemination and implementation of the results of the fellows' projects.

b) What considerations should other members have when approaching your challenges?

In developing similar programs, it would be important to ensure that there is a clearly defined institutional home and/or a well-defined and accessible audience for the fellows' "products". In addition, finding multiple and diverse opportunities for faculty and other institutional players to engage in the program and with the fellows will build stronger institutional links, open more possibilities for collaboration, and set in motion larger institutional change. Ideally, having a stable of engaged faculty would provide a strong foundation for such a program.

7) GENERAL INFORMATION

a) Who can be contacted to get more information?

Alfredo Artiles, the Faculty Director of Research at CCSRE (aartiles@stanford.edu) and Nina Dewi Toft Djanegara, the Associate Director of the Technology and Racial Equity Initiative at CCSRE (ninadewi@stanford.edu).

b) What is the current state of the project?

The Technology & Racial Equity Practitioner Fellowship program has extended beyond the timeline of the initial PIT-UN grant. In fact, the fellowship has become one of the cornerstones of CCSRE's larger initiative on technology and racial equity. Since the initial year of the fellowship in 2020, we have welcomed two additional cohorts of practitioner fellows (for a total of three cohorts over the lifetime of the program). Over three application cycles we have received hundreds of applications for the fellowship, indicating that there is a strong desire for continuation of this program. Each year, we have maintained a competitive selection process and have had to turn away talented candidates due to a limited number of slots. While we would like to keep the size of the cohorts relatively small in order to maximize engagement between fellows, in the coming years, our goal will be to institutionalize the program by securing long-term funding that ensures the longevity of the fellowship.

8) SELECTED MEDIA AND PUBLICATIONS ABOUT THE PROJECT

- <https://ccsre.stanford.edu/initiatives/technology-racial-equity-initiative> CCSRE's Technology and Racial Equity Initiative website
- <https://ccsre.stanford.edu/programs/race-technology-practitioner-fellowship> Fellows Bios and project descriptions for the first two cohorts
- <https://ccsre.stanford.edu/news/ccsre-announces-race-tech-practitioner-fellows> Announcement of 2020-201 cohort of practitioner fellows
- <https://hai.stanford.edu/news/hong-qu-shining-headlight-ai-blindspots> Profile on 2020-2021 Fellow Hong Qu – written by program partner HAI
- <https://hai.stanford.edu/news/renata-avila-reclaiming-ais-superpowers-collective-good> Profile on 2020-2021 Fellow Renata Avila – written by program partner HAI
- <https://stanforddaily.com/2021/02/03/even-if-you-can-do-it-should-you-researchers-talk-combating-bias-in-artificial-intelligence/> Article in Stanford Daily about “Race, Tech & Civil Society: Tools for Combating Bias in Datasets and Models” event
- <https://digital.hbs.edu/civic-tech/elizabeth-m-adams-on-civic-tech-as-advocacy-work/> Profile of Fellow Elizabeth Adams in Harvard Business School Digital Initiative
- https://appliedaipod.simplecast.com/episodes/ethical-tech-design-for-ai-ep-2-grGiGc_K Interview with Fellow Elizabeth Adams on the Applied AI podcast
- <https://magazine.blogs.wesleyan.edu/2021/05/28/what-artifical-intelligence-cant-see/> Profile of Fellow Hong Qu in Wesleyan magazine

9) MATERIALS DEVELOPED AS OUTCOMES OF THE PROJECT

- Tech & Racial Equity Conference: Anti-Racist Technologies for a Just Future – conference website, blog post on the conference <https://ccsre.stanford.edu/2021-tech-and-racial-equity-conference-anti-racist-technologies-just-future>
- <https://hai.stanford.edu/events/hai-weekly-seminar-elizabeth-adams> HAI Weekly Seminar on oversight of public surveillance technology with Fellow Elizabeth Adams
- <https://hai.stanford.edu/events/hai-weekly-seminar-renata-avila> HAI Weekly Seminar on prototyping feminist AI with Fellow Renata Avila
- <https://ccsre.stanford.edu/events/race-tech-civil-society-dei-or-tech-racial-justice> Webinar: DEI or Tech for Racial Justice? – featuring Adina Sterling (GSB, Stanford), Mark J. Diaz (Google Research), Brandeis Marshall (Race + Tech Fellow, Stanford)
- <https://ccsre.stanford.edu/events/race-tech-civil-society-tools-combating-bias-datasets-and-models> Webinar: Tools for Combating Bias in Datasets and Models – featuring Timnit Gebru (leading researcher, advocate, and co-author of Gender Shades: Intersectional Accuracy Disparities in Commercial Gender Classification), Michael Hind (IBM Distinguished Researcher leading work on AI FactSheets and AI Fairness 360), James Zou (Assistant Professor of Biomedical Data Science, and Computer Science and Electrical Engineering at Stanford University), and Hong Qu (CCSRE Race & Technology Practitioner Fellow)
- <https://ccsre.stanford.edu/events/race-technology-and-civil-society-foundations-intersections> Webinar: Race, Technology and Civil Society: Foundations + Intersections – featuring Ruha Benjamin (Associate Professor of African American Studies at Princeton University), Rediet Abebe (Junior Fellow at the Harvard Society of Fellows and an

incoming Assistant Professor of Computer Science at the University of California, Berkeley), Matthew Cagle (Technology and Civil Liberties Attorney at the ACLU of Northern California), Duana Fullwiley (Professor of Anthropology, Stanford)

- <https://pacscenter.stanford.edu/event/virtual-event-legitimizing-true-safety/> Webinar: Legitimizing True Safety – featuring cohort member Tawana Petty w/ Eric Williams (Detroit Justice Center), Clare Garvie (Center on Privacy & Technology at Georgetown Law), Cierra Robson (Harvard University), June 19, 2020.
- <https://pacscenter.stanford.edu/event/virtual-event-protecting-the-black-vote-during-covid-19/> Webinar: Protecting the Black Vote During COVID-19 – featuring cohort member Mutale Nkonde w/ LaTosha Brown (Co-founder of Black Voters Matter Fund), Leonard Cortana (PhD candidate at New York University), Charlton McIlwain (Professor of Media, Culture, and Communication at the NYU Steinhardt School), Maria Rodriguez (Assistant Professor at the Silberman School of Social Work at Hunter College). June 24, 2020.
- <https://ccsre.stanford.edu/news/panelists-challenge-facial-recognition> Panel discussion on Racial Bias in Facial Recognition at the Institute for Human-Centered AI’s conference on Ethics, Policy and Governance – featuring Matt Cagle (Technology and Civil Liberties Attorney at ACLU of Northern California), Wendy Chun (Simon Fraser University’s Canada 150 Research Chair in New Media in the School of Communication), Bridget Algee-Hewitt (Senior Research Scientist at CCSRE), Daniel Murray (Executive Director of CCSRE). October 29, 2019.
- <https://www.opendemocracy.net/en/democraciaabierta/world-shaped-one-million-adams/> Op-ed published by Fellow Renata Avila
- <https://aplusalliance.org/en/members> Network of feminist AI experts organized by Fellow Renata Avila
- <https://www.womenatthetable.net/blog/regional-snapshots-inclusive-ai> Regional AI workshops in the Global South convened by Fellow Renata Avila
- https://www.barnesandnoble.com/w/little-ai-and-peety-elizabeth-m-adams/1139382085;jsessionid=1F7A6F1FB2C24166022AAE0023BF0422.prodny_store01-atgap11?ean=9780578719894 Children’s book entitled “Little A.I. and Peety” published by Fellow Elizabeth Adams
- <https://www.youtube.com/watch?app=desktop&v=jvxED2i4HVc> “Can Algorithms Be Fair?” debate at Wharton Business School featuring Fellow Elizabeth Adams
- <https://cse.umn.edu/umsec/cf21-adams> “Exploring AI Ethics through Public Oversight of Surveillance Tech In Minneapolis” presentation by Fellow Elizabeth Adams to the University of Minnesota Computer Science department
- <https://aiblindspot.media.mit.edu/AL.html> Toolkit for uncovering AI blindspots developed by Fellow Hong Qu
- <https://www.belfercenter.org/event/belfer-policy-chat-ethical-approach-ai-governance> AI & policy discussion at Harvard Kennedy Center with Fellow Hong Qu

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