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.

The program was initiated in 2019, thanks to the support of the Public Interest Technology University Network. We later received an extension to fund a second cohort of practitioner fellows, who began in 2020. This report reflects the key learnings and outcomes of the second year of the program; however, because the overall project goals and design have not changed, there is some overlap with our 2019 report.

The second cohort of practitioner fellows has shaped public-interest technology and policy at the local and global levels through:

- Developing a peer-to-peer financial lending app for marginalized and unbanked communities
- Creating an African American Vernacular English (AAVE) corpus for NLP research for the development linguistic models that reflect the diversity of Black speech
- Designing a toolkit to help youth activists engage in digital organizing
- Producing original research and strategic litigation against police surveillance on BIPOC communities in Los Angeles
- Highlighting data biases in the most popular tools used by electoral campaigns

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 three-day virtual event to develop fellows' projects, establish a supportive cohort, and make connections between fellows and Stanford affiliates
- Convening monthly workshops with the fellows for cohort development and skills-building
- Organizing a 2-day virtual Technology and Racial Equity Conference attended by 2,000 people
- Creating a fellowship to support graduate students working at the intersection of technology and racial equity
- Mentoring a new generation of public interest technologists through internships that pair undergraduate students with practitioner fellows

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 is 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. In the second year of the program, we developed a new partnership with Stanford's Ethics, Society and Technology Hub to create on-campus programming and a new fellowship for graduate students that also centers technology and racial equity.

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). Rather than reinvent the wheel, 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 Covid-19 pandemic began during the first year of the project, which necessitated several changes to our project. The two major changes we made during the first year were 1) extending the fellowship period to give the fellows more time to complete their projects; and 2) shifting our seminars, annual summit, and other events to virtual formats. Going into the second year of the project, it became clear that there was no clear end-date in sight for the pandemic and it would continue to affect our project. We therefore extended and expanded upon the project adaptations from year one, producing more virtual programming and creating more opportunities for fellows to engage with their cohort online.

In the second year of the project, we also made some adaptations to the application process based on our observations of the kinds of projects that were most successful in year one. For example, in the first year of the project, we observed that the immediate results and impacts of the individual practitioner fellows' projects depended on the clarity and specificity of the project at the outset and the existence of a specific and accessible audience or user for the results of the project. Based on this learning, we adapted our criteria for selecting fellows in year two, prioritizing applications that identified a clear user-base and demonstrated an existing relationship with their intended audience. Furthermore, we observed in year one that there was little engagement between the practitioner fellows and Stanford faculty. In year two, we therefore asked prospective fellows to apply with a letter of support from a Stanford faculty member. Unfortunately, this strategy was not as successful as we had hoped for guaranteeing faculty engagement (see section 4A for further reflection) and will not be used in future years. However, the primary takeaway is that the criteria for selecting fellows should be adaptive and iterative, rather than set in stone.

The most significant change we made in the second year of the project was the addition of a sister fellowship program for graduate students with the support of our PIT-UN grant. Through the Technology & Racial Equity Graduate Fellowship Program, we created a structured interdisciplinary space to support graduate student research and facilitated engagement between our practitioner fellows, Stanford graduate students, and faculty. In September 2021, we welcomed our first cohort of 10 graduate students, an interdisciplinary group with representation from the schools of Engineering, Humanities & Sciences, and Law. In the Fall quarter, the fellows discussed a series of shared readings and workshopped their own research by sharing works-in-progress and receiving feedback from their peers. In the Winter quarter, the fellows broke into small groups and worked together to identify gaps in current research about race and technology. Finally, in the Spring quarter, the small groups collaborated to produce outputs that promote understanding of race and technology for the public. Overall, both the practitioner fellowship and the graduate fellowship share an emphasis on public engagement and praxis.

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

We evaluated the 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.

The 2021-2022 cohort of Technology & Racial Equity Practitioner Fellows produced a variety of outputs, including 1) a peer-to-peer financial lending platform for BIPOC and unbanked communities, which is now in beta testing mode; 2) an open-source corpus of AAVE text, now available on Github, that Natural Language Processing (NLP) developers can draw upon to represent the complexity and diversity of Black speech; 3) a digital toolkit for racial justice advocacy in education aimed at youth activists; 4) an interactive web report documenting the impact of police surveillance on BIPOC communities in Los Angeles; and 5) resources for organizers about how to overcome data biases that plague the most common voter profiling tools used in electoral campaigns. Due to the heterogeneity of project formats and goals, each project required unique metrics to measure success. 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. 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. Moreover, project success was measured primarily in terms of community and policy impacts, rather than traditional academic measures of impact, such as academic publications.

This year marked the first iteration of our new sister fellowship aimed at graduate students. The 2021-22 cohort of Technology & Racial Equity Graduate Fellows divided into two groups and produced 1) a feature article examining the limitations of current approaches to algorithmic audits, including perspectives from computer science, linguistics, psychology and law; and 2) a new undergraduate course on technology and racial justice that integrates scholarship from human-computer interaction, anthropology, and cultural studies. For this group, we evaluated project success in terms of the interdisciplinarity of the projects, fruitful collaboration between group members evinced by equal contribution to the project, and the relevance of the project outputs to the broader public. In future years, we aim to facilitate greater connections between

the graduate and practitioner fellows in order to create deeper social networks, as well as ensure that the graduate student project outputs are useful and applicable to a public audience.

The program overall should also be evaluated in light of longer-term impacts. For instance, the fellowship served as a springboard for major career changes 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 the Center for Comparative Studies in Race & Ethnicity. Since this program was launched, the Center now runs a graduate fellowship program, undergraduate events, curriculum, and engages faculty in a number of ways. With the Technology & Racial Equity Practitioner Fellowship as our anchor program, the Center has raised the profile of work at the intersection of technology and racial equity at Stanford and established an institutional home for this work.

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 and graduate fellows.

4) CHALLENGES

a) What were the expected challenges you encountered?

One of our hopes with the project was to create opportunities to engage Stanford faculty. Our theory of change, in terms of Stanford as an institution becoming more committed to public interest technology and racial equity, requires investment and engagement from faculty. Indeed, one reason we decided to launch a program that focused on recruiting external social sector leaders was because we knew that it is difficult to secure such faculty investment and that there are few faculty at Stanford currently engaged in such work.

[redacted] In Spring 2021, we convened an interdisciplinary group of eight faculty members with representation from the departments of Anthropology, Computer Science, Education, English, Management Science & Engineering, and Sociology. In Spring 2022, the group's mandate was expanded to provide guidance on new programming beyond the graduate fellowship and we added eight more faculty members from the departments of Civil and Environmental Engineering, Communications History, History of Science, Medicine, Psychology, and Science & Technology Studies. We are now planning to integrate the new committee members into the graduate student fellowship program as faculty mentors. Building partnerships with faculty is an ongoing process and has become a key focus of our expansion efforts.

b) What were the unexpected challenges?

Going into the second year of the project, we were aware that the Covid-19 pandemic would be an ongoing concern, however when we welcomed the second cohort of fellows in January 2021, we were unable to anticipate how long the pandemic conditions would last and how our fellows projects would be affected. There was an overall climate of uncertainty that made long-term planning difficult.

One of the significant challenges that arose in year two was that this group of fellows never had the chance to meet in person (the first-year cohort was fortunate enough to meet for a week-long event in January 2020; this in-person meeting provided a strong foundation for later virtual interactions). We knew going into year two that it was very likely that this group would never have the chance to meet in person and were faced with the challenge of building community amongst a group that would only ever interact virtually. Furthermore, we had a cohort of fellows spread across many international time zones, which made it difficult to find a time during which all the fellows could meet. In the end, we planned a full week of virtual meetings which included synchronous and asynchronous participation to accommodate different schedules. To create bonds between fellows, which can be difficult in larger Zoom rooms, we split them into small groups to work collaboratively on a presentation. Later in the week, we shuffled the groups into new pairings so the fellows could have a chance to meet new people and workshop each other's projects. In order to mimic the experience of visiting the Stanford campus, we created a virtual scavenger hunt and invited faculty and researchers from other centers on campus to give lightning talks.

Throughout the 18 months of the fellowship, we continued to meet virtually every month for project check-ins, skill building workshops, and guest presentations. For instance, we brought in a facilitator from the Stanford Design School to give a lesson on design thinking, and hosted a conversation with a tech journalist, Khari Johnson, about how people of color can better advocate for themselves and their causes when being interviewed by the media. We surveyed the fellows at several points over the 18 months and tailored our programming to satisfy their immediate concerns and needs. For instance, as we reached the tail end of the fellowship, we found that many were affected by Zoom fatigue and professional burnout, so we shifted the focus of our meetings to emphasize community and solidarity.

c) What were the diversity, equity, and inclusion challenges in your project?

Racial justice is at the core of our program. The Technology & Racial Equity Practitioner Fellowship was motivated by our desire to uplift practitioners who work on behalf of communities of color, who are often most vulnerable to the adoption of new technologies, whether in the analysis and design of technologies themselves or the policies and protocols that govern their use. Our program was therefore intentionally directed at diversity, equity, and inclusion (DEI) both in terms of the topics of the fellows' projects and the personal identities of the fellows. From the outset of the program, CCSRE leaned on its network of people and organizations working to advance racial justice to solicit a diverse pool of applicants. This outreach resulted in two cohorts of fellows that were 100% BIPOC. In addition, our program as a whole addresses racial justice. Our selection for fellows/projects in tandem with this overarching framework created a cohort that connected quickly and deeply. During the Fellows Week event that kicked off the program, fellows found common ground discussing issues related to racial justice and equity in the tech sector, building bonds based on solidarity, common experiences, and shared goals.

d) What were the challenges you encountered with partners you engaged in your project?

We encountered no challenges with our key partner, the Stanford Digital Civil Society Lab. The program served to foster a strong partnership that has only deepened since the project was initiated in 2020. At times, it was a bit more difficult to find alignment with our other Stanford partner, the Institute for Human Centered Artificial Intelligence (HAI). They were an excellent partner on discrete aspects of the program, such as our virtual conference. However, collaborating in a more holistic way proved difficult. In large part, this was due to the fact that the Institute was brand new and rapidly growing and was therefore working to define their own programs and bring on new staff.

In the second year of the program, we made further efforts to strengthen our partnership with HAI by inviting them to join the advisory committee for our new graduate fellowship. This collaboration grew stronger in 2021, when HAI committed to funding the salary of a new Associate Director for the Technology & Racial Equity Initiative. The ability to hire a full-time staff member whose role is dedicated solely to managing our technology and racial equity work was an important step in institutionalizing this program.

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. In the second year of the program, we continued to refine 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 that will be beneficial for future iterations of this fellowship even after the pandemic subsides.

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.

From the first two years of the project, we have observed that one of the key impacts of this fellowship is the connections made between fellows. These connections have resulted in professional collaborations and career changes, but perhaps most importantly, the fellows have become a source of support and solidarity during these challenging times. In order to further emphasize the interpersonal aspect of our fellowship, we have brought on an external consultant who specializes in community-building to facilitate our monthly meetings. We have found that community is not necessarily something that emerges organically; especially when contact between people is only virtual, creating community requires deliberate and intentional work.

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 all three cohorts
- https://hai.stanford.edu/news/designing-anti-racist-technologies-just-future Profile on Tech & Racial Equity Conference – written by program partner Stanford HAI
- https://www.montclair.edu/newscenter/2021/03/04/tara-conley-awarded-stanford-university-race-and-technology-fellowship/ Profile of 2021-22 fellow Tara Conley
- https://www.forbes.com/sites/morgansimon/2021/02/25/black-futures-month-8-black-entrepreneurs-to-watch/?sh=4c666f0912d8 2021-22 fellow Sabrina Hersi Issa featured in Forbes magazine list of 8 Black Entrepreneurs to Watch
- https://www.theguardian.com/us-news/2021/nov/07/lapd-predictive-policing-surveillance-reform 2021-22 fellow Shakeer Rahman's project featured in *The Guardian*
- https://www.health.com/news/financial-education-health-outcomes 2021-22 fellow Kortney Ziegler quoted in Health 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
- Panel on Decentralized Ledgers and Equity: Key Perspectives featuring Elizabeth Renieris (Human Rights Fellow, Carr Center for Human Rights Policy at Harvard Kennedy School and Technology & Racial Equity Practitioner Fellow), Kortney Ziegler (Entrepreneur, founder of Wellmoney and Technology & Racial Equity Practitioner Fellow), Bill Maurer (Dean of the School of Social Sciences and Professor of Anthropology; Criminology, Law and Society; and Law at the University of California, Irvine), Nina Dewi Toft Djanegara (Ph.D. Candidate in Anthropology and Technology & Racial Equity Graduate Fellow)
- Panel on Police Technology and Abolitionist Movements featuring Shakeer Rahman (Lawyer and community organizer with the Stop LAPD Spying Coalition and Technology & Racial Equity Practitioner Fellow), J. Khadijah Abdurahman (Director of We Be Imagining, Columbia University's The American Assembly), Jamie Garcia (Registered Nurse and Organizer, Stop LAPD Spying Coalition), Sucheta Ghoshal (Assistant Professor of Human Centered Design & Engineering, University of Washington)
- https://automatingbanishment.org/ Automating Banishment report produced by 2021-22 fellow Shakeer Rahman, in collaboration with Stop LAPD Spying
- https://www.mediamakechange.org/projects/ruby RUBY: A Digital Toolkit For Racial Justice Advocacy in Education produced by 2021-22 fellow Tara Conley
- https://github.com/jazmiahenry/aave_corpora African American Vernacular English (AAVE) dataset for Natural Language Programming (NLP) developers

- https://www.nbcnews.com/think/opinion/trump-s-twitter-ban-renews-calls-tech-law-changes-many-ncna1253627 “Trump's Twitter ban renews calls for tech law changes by many who don't get tech or the law,” op-ed written by 2021-22 fellow Sabrina Hersi Issa

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