Diaspora, Agriculture, & AI: Community-based Integration of Smart Technologies in Black Diasporic Agricultural Practices

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Reimagining smart agriculture with black diasporic farming communities

Project Challenge

Black diasporic urban farming communities face challenges that AI-driven technologies can potentially support. However, industry tools for agriculture often are not made with these communities in mind, and therefore fit awkwardly when adopted into the community leading to further bias and harm.

Integrative Research — three themes

Community perceptions: what are the existing artifacts, practices, beliefs, values and needs associated with black diasporic farming? How do the black diasporic farming communities perceive the role of smart technologies in agricultural decision-making?

Designing for diasporic needs: what design techniques (participatory design, co-design, etc.) can effectively support in evaluating existing AI-based agricultural technologies? How can we implement co-design and participatory design techniques towards ideating and prototyping novel AI-based agricultural technologies for black diasporic communities?

Sustainable integration: what are the existing practices and beliefs associated with popular industry-generated smart technologies for agricultural decision-making, and how do these practices and beliefs align with those of black diasporic farming communities? How can connection of black diasporic knowledge on farming with industry and academic innovations of smart agriculture build towards a mindful, productive, and sustainable integration of AI technologies in diasporic communities?

Project Vision

To address this gap, our project aims to understand what it means to integrate **AI-based technologies in urban, culturally-motivated, community-based agriculture practices**. Practicing community-based participatory research (CBPR), our approach centers relationships, specifically community-industry partnerships. In that, we build towards long-term relationships—with both the makers and the stakeholders of "smart" agricultural technologies—grounded in the values of trust and accountability. To this end, this project leverages two kinds of partnerships. First, it roots our questions and design practices in successful and productive collaborations with *three community-based organizations*—each practicing diasporic farming in the Seattle metropolitan area and beyond. Secondly, this project integrates insights and expertise from *three industry partners*—each designing, developing, and marketing smart solutions for agricultural tasks.

Plans for the Next Year / Anticipated Outcomes

Major project milestones and/or products that we plan to accomplish over the next year:

- Establishing community relationships
- Continuing fieldwork engagements
- Stakeholder interviews

Specific research activities we will undertake to accomplish these milestones or products:

- Interviews with 25-30 key informants across
- Testing of shared data collection tools; development of shared protocols
- Primary coding and analysis of materials
- Preliminary writing
- Planning for participatory research