



IDIA FELLOWSHIP

Co-Designing AI with Women for Better Livelihoods



Qhala

Introduction and Background

Artificial Intelligence (AI) is increasingly transforming livelihoods across Africa. Its applications span a wide range of sectors from driving business innovation and improving agricultural productivity to enhancing education systems and strengthening maternal and community health. While these advances hold immense potential to accelerate socio-economic development, women remain significantly underrepresented in AI research, design, and policy-making. Globally, only 22 percent of the AI workforce is made up of women, and this gender imbalance risks deepening the digital divide if not directly addressed. Women entrepreneurs and mothers, especially in low- and middle-income contexts, are already navigating AI-enabled tools through their smartphones, whether in managing businesses, accessing mobile health applications, or engaging with AI-driven chatbots for maternal care. However, many of these tools are not designed with women's specific needs in mind.

Idia Fellowship will create a platform for women researchers to study these realities and influence the design of more inclusive technologies. The fellowship will run for 12 months and is open exclusively to women scholars. The program will host a cohort consisting of one postdoctoral fellow, two PhD students, and two master's students drawn from fields such as computer science, information systems, health informatics, strategy, and innovation. We will recruit fellows from different countries in Africa to evaluate the needs of women in various contexts. In addition, we will work with two software development fellows and two health fellows, and a policy fellow to support us with the re-design of the AI tools. Together, the fellows will explore how women use AI-enabled smartphones for business and maternal health, and they will generate design recommendations to ensure that future tools better reflect the lived experiences of women users.

Part I: AI Testing Phase – Women's Livelihoods with Smartphones

The first phase of the fellowship will focus on documenting and analyzing how women are currently engaging with AI-powered smartphone applications. This research will highlight the realities of women entrepreneurs using mobile platforms for digital payments, business analytics, and customer engagement, as well as the experiences of mothers who interact with maternal health applications and AI chatbots that provide guidance on prenatal and postnatal care.

We will install AI enabled maternal health and business applications on smartphones and use them as exploratory probes to better understand women's needs and identify design considerations that can enhance their effective engagement with AI technologies. We will provide smartphones to 20 participating women, enabling them to explore and interact with the tools over a three-week period. Through a combination of field-based research, user testing, and in-depth interviews, fellows will investigate the benefits these tools provide as well as the

challenges that women encounter. Particular attention will be paid to issues of usability, accessibility, affordability, cultural appropriateness, and trust in AI-driven advice. By the end of this phase, the fellowship will have generated clear evidence on the strengths and limitations of existing smartphone-based AI applications for women's livelihoods and maternal health.

Part II: Design Recommendation Phase – Towards Inclusive Smartphones

The second phase will focus on translating the findings from the testing phase into concrete proposals for making AI-enabled smartphones more inclusive and responsive to women's needs. This phase will emphasise human-centred design, ensuring that women's lived experiences guide the development of future technologies.

Fellows will work closely with participants, smartphone manufacturers, AI developers, and health fellows through co-creation workshops. The aim will be to identify how smartphone features and applications can be adapted to address challenges uncovered during the first phase. We will collaborate with software developers to integrate participants' feedback, ensuring that the tools are practical, inclusive, and responsive to women's needs.

Possible outcomes may include localized maternal health chatbots that function offline, simplified AI dashboards to support small-scale women entrepreneurs, or voice-enabled applications to address literacy barriers. The fellows will synthesize their insights into design guidelines, prototypes, and policy briefs, which will be disseminated to technology developers, healthcare providers, and policymakers across Africa.

Fellowship Activities and Support

The fellowship will run for a duration of one year. The program also carries the potential for renewal beyond the initial term. Over the one-year period, fellows will engage in an intensive program that blends research with applied innovation. They will receive training in AI applications, user research, and design thinking methodologies. Mentorship will be provided by experts in academia, industry, and healthcare, ensuring a balance between technical expertise and contextual knowledge. The fellowship will also emphasize community building, encouraging collaboration across disciplines and promoting a supportive network that extends beyond the program's duration. Fellows will be supported to publish their outputs in open-access formats and share case studies that capture women's experiences with AI-enabled smartphones in real-life contexts.

Expected Outcomes

The fellowship is expected to generate several key outcomes. First, it will produce a body of evidence that illustrates how women use AI tools on smartphones for livelihoods and maternal health, providing insight into both opportunities and barriers. Second, it will deliver actionable design recommendations and, where feasible, prototypes that can inform the development of inclusive technologies. Third, it will strengthen the research and innovation capacities of five

women scholars, equipping them to lead at the intersection of AI, health, and business. Finally, it will foster greater awareness among policymakers, developers, and civil society stakeholders on the importance of gender-inclusive AI design in Africa.

Conclusion

The Women, AI, and Livelihoods Fellowship seeks to position women not merely as end users of AI technologies, but as central actors in shaping their design and application. By combining a rigorous testing phase with a design recommendation phase, the fellowship ensures that women's voices and lived experiences directly inform the next generation of AI-enabled smartphones. This initiative will contribute to closing the gender gap in AI while advancing socio-economic empowerment and maternal health outcomes for women across the continent.

Appendix 1: The 6 Months Workplan

Month	Key Activities
Month 1	Orientation and Training: Program launch, AI literacy sessions, mentor matching, and finalization of research design.
Months 2–3	AI Testing Phase Field Research: Engage women entrepreneurs and mothers, collecting data on smartphone AI use in livelihoods and maternal health.
Months 2–3	AI Testing Phase Analysis: Assess usability, accessibility, and barriers of AI-enabled smartphone tools, and document both benefits and limitations.
Months 4–5	Design Recommendation Phase Workshops: Conduct co-creation sessions with women, developers, policy and health fellows to refine solutions.
Months 4–5	Design Recommendation Phase Drafting Outputs: Develop prototypes, design recommendations, and policy briefs informed by women's lived experiences.
Month 6	Final Synthesis and Dissemination: Consolidate findings, publish reports, and host a public showcase event with policymakers, developers, and civil society.