Call for expressions of interest:

Establishing multidisciplinary artificial intelligence for development labs (AI4D Labs) in Africa

Date issued: Monday February 15, 2021

Deadline for applications: Friday March 19, 2021

Canada's International Development Research Centre (IDRC) and the Swedish International Development Agency (Sida) invite expressions of interest from public universities in low and lower-middle income countries in Sub-Saharan Africa to establish AI for development research labs (AI4D Labs) to engage in world-leading, multi-disciplinary, responsible[1] AI research, innovation, and instruction. This funding opportunity will provide funding to two (2) public universities representing anglophone and francophone linguistic regions. A budget of up to CAD $1 million is available over a 3-year period (2021-2024) for each Lab.

The goal of this initiative is to amplify African AI talent, research, and innovation by supporting the creation of two multidisciplinary AI4D Labs in public universities.

This call is part of the four-year Artificial Intelligence for Development in Africa program, a joint endeavour between IDRC and Sida dedicated to accelerating the realization of Africa's Artificial Intelligence (AI) innovations towards achieving continental, and global development goals. It aims to enhance local skills, facilitate global collaboration with Africa's Machine Learning (ML) Community, increase AI knowledge to promote governance, inclusion, and adoption, to create a responsible AI eco-system to improve the lives of ordinary people.

The two winning universities will establish or expand Labs that will develop and implement a locally relevant, multidisciplinary, and responsible AI4D research agenda, nurture local talent that responds to the capacity requirements of the public and private sector, develop associated AI4D academic courses, trainings, and curriculum, and broker alliances among the academic,

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[1] For this call, responsible AI is defined as a framework that brings critical practices together, ensuring an ethical, inclusive, rights-based, and sustainable use of AI technologies for public benefit.

industry and institutional communities. They will serve as resource centres for the development of the next generation of AI4D scholars and practitioners in the continent.

> **AI4D Labs definition**: For this call, AI4D Labs refer to dedicated research facilities within a public university dedicated to promoting excellence in multidisciplinary AI4D research, theory, teaching and practice. It will provide the intellectual and experimental environment required to advance knowledge, new discoveries, and innovation.

1. AI4D Africa Background

AI applications are profoundly impacting our world. AI is a set of technologies upon which applications are being built and applied in almost every domain of social and economic life. Fuelled by the increasing availability of computational power, improved connectivity, and data, AI offers innovative ways to promote human development by spurring new start-ups, improving food systems, enabling higher quality education systems and tackling pressing health and climate challenges for many low- and middle-income countries in Africa. The resulting impact stands to be massive, if not revolutionary.

Across the continent, Africa has a burgeoning community of data scientists, ML specialists, and researchers who are exploring how AI can contribute to tackling local challenges. For instance, Agrix Tech, a Cameroon start-up rolling out in 2020, aims to help African farmers detect plant diseases and offer both chemical and physical treatments as well as prevention measures. M-Shule in Kenya uses AI and SMS to deliver personalized, accessible education to primary school students across Africa. The enthusiasm and breadth of applications are witnessed in the highly popular [Deep Learning Indaba](#) and [Data Science Africa](#) events that bring together hundreds of practitioners from across the continent to learn and share.

AI4D Africa will seek to address the above challenges through supporting the African-led development of an AI ecosystem engaged in the responsible development of AI. The program will target funding towards three critical pillars that will be needed to shape AI in Africa as a force for good:
- Scaling proven responsible AI innovations that address Africa's different development challenges;
- Supporting policy research think and do tanks to establish responsible AI; and
- Academic capacity building to foster African talent and skills around AI.

This initiative will contribute to the last pilar, along with the African AI4D Scholarship Program (announced previously) that will provide financial and professional support for the next generation of PhD students and early career academics across the continent.

We encourage all applicants to have a look at the original [AI4D Program Proposal](#) as well as the [AI4D Africa website.](#)

2. Approach

The Labs will bring together multidisciplinary teams of researchers and innovators to collaborate on critical AI4D questions. It will include graduate students and postdoctoral researchers pursuing research on African AI4D applications within specific domains as well as on cross-cutting issues such as AI and human rights, gender equity, the future of work, climate change, and the inclusion of marginalised populations.

In line with IDRC's approach for achieving quality research for development[2], the Labs' missions should embrace a broad definition of research quality that includes scientific rigor but also recognizes other critical dimensions. These include:

- **Multidisciplinarity**: Produces multi-, inter- or transdisciplinary research, across disparate fields. Brings in scholars from disciplines, ranging from computer to natural to social sciences, to collaborate on the development and implementation of a research agenda.

- **Gender equity**: Strives for equality in all aspects of its work. Takes an intersectional approach[3] to equality recognizing that women, girls, LGBTIQ2+, and other marginalized groups experience persistent, structural barriers to equality in the developing world. Recognizing their right to equality, and that AI systems may continue to perpetuate or amplify these barriers unless specific steps are taken to remedy them.

- **Diversity and inclusion**: Research displays sensitivity to, and respect for, local voices, knowledge, and contexts. Proposes mitigation strategies to reduce risks for vulnerable groups to be not included and represented, as well as fragile institutions, systems, and contexts.

- **Innovation**: Takes risks by, for example, supporting new or riskier fields of work, engaging with complex and integrative challenges, builds constituencies and networks for change, test out innovative ways to scale impacts.

Indicative activities of the Labs are:

I.   Develop and implement a multi-disciplinary research agenda on responsible, African AI4D that is informed by national or local priorities

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[2] IDRC views research quality as a function of four dimensions: integrity, legitimacy, importance, and positioning for use. Read more about the RQ+ model at https://www.idrc.ca/en/research-in-action/research-quality-plus.
[3] Intersectionality is a concept that shows how gender intersects with other aspects of identity, such as age, ethnicity/nationality, ability, education, class, religion, sexual orientation, geographic location, and any other relevant factors, to impact experiences, agency, access to and control of resources, power and knowledge.

- Develop a research agenda, including short- and long-term key research objectives that are relevant in the local/regional context and can make lasting contributions to the research field;
- Implement collaborative and fundamental research projects that will guide and inform discussions/debates around AI for development;
- Develop and make openly available AI4D teaching and learning resources such as curriculum and academic courses; and
- Conduct seminars, workshops, and other learning and networking events to help share knowledge on AI.

II. Bring on board talented scholars and cultivate expertise to leverage AI4D advances

- Ensure representation of emerging researchers, including masters and/or PhD students, as well as established thought leaders (prioritizing gender equality and representation of minorities in the field);
- Create an environment that promotes collaboration and peer-learning across research disciplines and establish a large community of scholars with similar objectives;
- Ensure buy-in from members to develop a long-term vision and plan for continued operation beyond the funding period; and
- Promote diversity, equity, and inclusion principles across all work and actively engage in dialogue and action on these issues.

III. Strengthen the local/regional AI ecosystem to spark new ideas and create new alliances

- Create a network that includes academic partners and private sector partners to discuss and utilize AI research and innovations that create positive change in Africa; and
- Enable co-development of new applications with private sector partners, and where appropriate, to bring to scale innovations.

IV. Connect with the AI4D Africa program network

- Participate and help to organize AI4D conference(s);
- Participate in AI4D Africa program activities as a member of the governance committee; and
- Support shared monitoring, learning and evaluation with other networks and participating organizations.

The above list is not considered exhaustive and can be complemented by other activities that will contribute to advance the responsible AI field in Africa.

3. Eligibility and desired qualifications

This call for proposals is open to public universities from eligible low and lower-middle income countries[4] with demonstrated expertise in the subjects that are critical for responsible AI research, education, and innovation.

To be eligible, applicants must meet the following criteria:

- Be part of a recognized, state-owned university that is predominantly funded by government;
- Possess a track record of research on innovation, technologies, and AI applications and on cross-cutting issues such as AI and human rights, gender equity, the future of work, climate change, and the inclusion of marginalised populations;
- Be committed to support the responsible, home-grown development and deployment of AI through investments in innovation, policy research, and capacity; and
- Have working capacity in English or French, depending on their linguistic region of interest (anglophone or francophone Africa). Fluency in both languages and inclusion of Lusophone scholars as collaborators are considered assets.

Final decisions will be based on selecting one public university from each linguistic category.

4. Funding and duration

AI4D Africa will allocate up to CAD $1 million will be allocated for each winning proposal for up to 3 years (2021-2024).

The Labs should, however, have a long-term vision and strategy, and be setup to continue beyond the funding period. The intent is to build lasting institutional capacity for responsible AI research through the establishment of these Labs.

It is also desired that grants are supplemented by additional funds from other sources to help ensure longevity of the Labs.

5. Application process

Applicants should submit an expression of interest of no more than 4,000 words that clearly addresses the following:

- An overview of the Labs' objectives and governance structure;
- Preliminary research plan including thematic priorities and potential project ideas;

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[4] The list of eligible countries can be found in Annex I.

- An overview of relevant experience, key personnel to be involved, interdisciplinary approach and collaboration strategies;
- A demonstration of the university and staff's commitment to incorporate and promote responsible AI, inclusion, and gender-sensitive principles; and
- Key activities to be supported with the proposed budget.

In addition, please include:
- Contact information of the organisation and proposed head of the Lab/principal investigator; and
- A maximum of 3 abridged CVs of key research members. CVs should be no longer than 2 pages each.

Applicants should note that no further documentation will be required or reviewed at this stage. Applicants who are successful at this stage will be invited to submit a full proposal.

6. Evaluation Criteria

IDRC and Sida will consider the following criteria in the evaluation of all proposals and reserves the right to reject proposals based on relevant policy or legal considerations.

Review criteria	Weight
I. Lab's objectives and governance structure • Well-thought-out objectives that are relevant in the local/regional context and can make lasting contributions to the field; • A long-term strategy that carefully incorporates and promotes inclusion and gender-sensitive principles; and • Clear governance structure that show how the Lab will stay accountable and transparent in its operations.	30%
II. Preliminary research plan • Sound preliminary research agenda, including key themes and potential project ideas; and • Clear commitment to integrate an interdisciplinary lens as well as inclusion and gender-sensitive principles in research activities.	30%
III. Relevant experience and capacity • Relevant experience and understanding, demonstrated through past projects, programs, and academic papers of faculty/department members, of working on AI research and innovation; and • Demonstrated thought leadership and expertise of the principal investigator(s) to lead the establishment of the Lab.	30%
IV. Budget • Clear and coherent plans for the use of available funding, appropriate for the proposed activities; and • Strategies for long-term sustainability, including partnerships mobilization plan.	10%

7. Review process and key dates

The review process will consist of the following steps:

(1) Verification of eligibility requirements and completeness: IDRC will review submitted expressions of interest to ensure they meet eligibility requirements.
(2) Review and ranking: Each expression of interest will be reviewed and ranked by two IDRC program officers and one Sida officer.
(3) Shortlisting expressions of interest: On the basis of scoring and internal discussion, IDRC and Sida will shortlist three high-quality expressions of interest for each linguistic region and will invite them to submit a full proposal.

The timeline for this call is as follows:

Activity	Date
Launch of the call	February 15, 2021
Deadline for questions	March 12, 2021
Answers to questions posted	March 15, 2021
Application deadline	March 19, 2021
Selection of shortlisted institutions	March 29, 2021
Submission of full proposals	April 30, 2021
Final selection	May 14, 2021

8. Inquiries

If you have any questions about this call for expressions of interest, please contact the AI4D Africa team at AI4DAfrica@idrc.ca.

Annex I. List of eligible countries

This call is open to public universities in low and lower-middle income countries in Sub-Saharan Africa, as per the country classification of the World Bank[5]. Eligible countries include the following:

Low income countries (US$1,035 or less)

Anglophone countries	Francophone countries
Central African Republic	Burkina Faso
Eritrea	Burundi
Ethiopia	Chad
The Gambia	Democratic Republic of Congo
Guinea	Guinea
Somalia	Madagascar
Liberia	Mali
Malawi	Niger
Mozambique	Togo
Rwanda	
Sierra Leone	
South Sudan	
Sudan	
Uganda	

Lower-middle-income countries (US$1,036 to US$4,045)

Anglophone countries	Francophone countries
Djibouti	Benin
Eswatini	Cameroon
Ghana	Congo, Rep
Kenya	Comoros
Lesotho	Côte d'Ivoire
Mauritania	Senegal
Nigeria	
Rwanda	
Sierra Leone	
Swaziland	
Tanzania	
Zambia	
Zimbabwe	

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[5] 2021 World Bank country classification at https://datahelpdesk.worldbank.org/knowledgebase/articles/906519.

The following countries **are not** eligible for this call:

Upper middle / High income countries

Anglophone countries	Francophone countries
Botswana	Seychelles
Equatorial Guinea	
South Africa	