Call for Collaborative Research Proposal

Application of Artificial Intelligence (AI) and Machine Learning (ML) in Agriculture, Health and Finance in East African Community (EAC).

Deadline: 22/08/2024

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Call Opening Date: 23th July, 2024

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1. BACKGROUND

Africa Research Institute For AI (ARIFA), is a not-for-profit think tank dedicated to advancing impactful research and specifically focused on Sub-Saharan Africa (SSA). The organization seeks to foster innovation, facilitate knowledge exchange, and drive evidence-based policymaking to effectively tackle the dynamic challenges posed by the rapid advancements in technology. ARIFA aims at managing collaborative research calls in the application of AI in agriculture health and finance in EAC. The collaborative research call will be funded by the ARIFA.

Under this collaborative agreement, ARIFA aim to strengthen research collaborations between researchers in the EAC countries on application of AI in agriculture, health and finance services.

2. RATIONALE AND SCOPE OF THE CALL

In a bid to promote the utilization of emerging technologies in the socio-economic development of EAC there is need to leverage these technologies on our existing capacities so as to improve livelihoods. Research collaborations on AI in health, agriculture and finance can drive innovation, solve real-world challenges, and bridge the gap between research and implementation. In that regard, the contribution of AI in generating sectoral and organizational efficacies and efficiencies is key to developing nations which seek immediate solutions their health, finance and agriculture systems. By bringing together experts from various national boundaries within EAC, diverging fields and involving industry stakeholders from the EAC countries in the research process, it is envisaged that this programme can develop more effective and practical AI-based solutions that have the potential to transform the health, finance and agriculture sectors of EAC.

3. THEMATIC FOCUS

Researchers in the area of AI directed to health, finance and agriculture in EAC countries will collaborate to prepare research proposals focusing on AI application either in health technologies, digital finance or agriculture technologies. Project proposals submitted under this call may include, but are not limited to, the following research areas:

- Genetic and Hormone Interactions;
- Medical Imaging and Diagnostics;
- Anti-Microbial Research (AMR);
- Anti-Ageing and Cognitive;
- Anti-Cancer Research;
- Climate and Development;
- Sustainable Finance;
- Precision Farming.

4. EXPECTED OUTCOMES

It is expected that interventions of the projects will improve the utilization of emerging technologies in the above stated areas of health, finance and agriculture sectors of EAC. Projects should also aim within their proposed duration to enhance the capacity of researchers and relevant sectors in the practicability of AI.

5. FUNDING LEVEL

The overall indicative amount made available under this Call for Proposals is 50,000.00 USD. Collaborative research projects will be implemented for a period not exceeding **twelve months** (**12 months**) **from 15th October 2024 to 14th October 2025**. The contracting authority reserves the right not to award all available funds. Equally, this amount could be reviewed during the implementation phase should more funds become available. Permissible budget items include the following:

- Material costs, if they are directly linked to the research project, in particular, material of enduring value, the cost of expendable items, field expenses, travel expenses or third-party charges;

- Direct costs incurred through the use of research infrastructure linked to the research;

- Costs of organizing conferences and workshops in connection with the funded research; and

- Costs of national and international cooperation and networking activities directly associated with the funded research.

6. ELIGIBILITY CRITERIA

a. Applications are open to bona-fide researchers from Public Research, Higher Learning

Institutions (HLIs), Private Sector, Civil Society Organizations (CSOs) and Non-Governmental Organizations (NGOs) registered in EACs are eligible to apply.

b. The Grant will fund **only Applied Research project** in the listed thematic areas. Research proposals must demonstrate the application of scientific principles or basic scientific discoveries to solve real life challenges. Basic or purely theoretical research will not be considered.

c. Awarded grants can either fully fund a new activity proposed in a grant application or contribute, through co-financing, to a larger activity that is funded through other sources but which objectives and implementation aligned to the objectives and scope of this Call.

d. One organisation can submit only one application. In their applications, organisations need to clarify the level of funding required (up to 10,000.00 USD) providing clear justification for, and a breakdown of, its resource plan. Up to 5 small grants with a budget of a maximum of 10,000.00 USD each will be provided.

7. ETHICAL CLEARANCE

Where the project involves human participants and animal subjects, the Principal Investigator in the respective country shall obtain ethical clearance from an appropriate organization designated research ethics committee before any grant disbursement and implementation of the project. ARIFA will also ensure that the ethically cleared research projects have been inspected for ethical compliance in the field besides the ordinary monitoring and evaluation.

8. SUBMISSION AND PROCESSING OF PROPOSALS

a. To apply, applicants are required to submit a duly completed proposal (Annex A: Concept Note and Budget) providing all requested details in the application template, including details of the proposed activity, intended impact, timeline for implementation, and summary budget.

b. Applicants must use only the Concept Note and Budget form provided to prepare their application, as only this model form will be assessed. It is therefore of utmost importance that this document contains ALL relevant information concerning the proposed project. Hand-written Concept Notes will not be accepted.

c. The applications need to be submitted by email sent to the address: research@arifa.org no later than by 22nd August 2024 (17.00 EAT).

d. No additional documents/annexes than those requested should be sent at the time of submission. Clarification will only be requested when information provided is not sufficient/unclear and thus prevents the contracting authority from conducting an objective assessment.

e. Late applications will not be considered.

f. ARIFA's decisions will be final.

9. CONTACT INFORMATION

Any enquiries from ARIFA researchers should be directed to Mr. Deogratius C. Bubelwa research@arifa.org.

10. EVALUATION

The selection process will be undertaken by the appointed Evaluation Committee comprised of ARIFA internal management team and external reviewers with subject matter expertise as well as compliance expertise. Evaluation will focus on: 1) compliance with the Call objectives and requirements, 2) alignment to the ARIFA priority themes and initiatives.

11. EVALUATION GRID

SNo.	Criteria	Marks Available
1	Relevance to chosen thematic focus area	15%
2	Proposed impact	20%
3	Cost Effectiveness and clear budget	15%
4	Resume or statement of qualifications for individual(s) who will be performing the work.	25%
5	Examples of previous reports/assignments similar to this RFP	25%
	TOTAL	**100%**

12. TIMELINE

SNo.	Activity	Dates
1	Application period commences	24th July 2024
2	The deadline for submission of Full Proposals	22nd August 2024
3	Evaluation of detailed proposals	23rd Aug 2024 to 19th Sept 2024
4	Deliberation / proclamation of results	21st Sept 2024 to 22nd Sept 2024
5	Award notification to the winners	21st Sept 2024 to 23rd Sept 2024
6	Signing of grant contracts	25th Sept 2024 to 27th Sept 2024
7	Initial disbursement of the approved budget	28th Sept 2024 to 29th Sept 2024
8	Research projects implementation	2nd Oct 2024 to July 2025
9	Final report	28th August 2025
10	Project Financial Audit	30th September 2025

ANNEX 1: PROPOSAL FORMAT/TEMPLATE

The full proposal in any of the priority areas should be prepared in the following format and address elements therein.

1.   EXECUTIVE SUMMARY

This section provides a succinct high-level summary of the proposed project. The summary should be in plain English, avoiding the use of jargon and acronyms. Please note that this summary will be published in the International Journal of Artificial Intelligence and Technology (IJAIT) and ARIFA website. The summary should be short but detailed enough to stand alone. It must not be more than one page long.

2.   BACKGROUND AND RATIONALE

Describe the problem that is to be investigated and the questions that will guide the research process. Provide a brief overview of the body of knowledge related to the problem and indicate the knowledge gaps that the proposed research will fill. To show the importance of the problem, this section should discuss: how the research relates to the country's development priorities; the scientific importance of the problem; the urgency and magnitude of the problem and how the research results will contribute to its solution; the special importance of the project for the private sector; and the need to build up research capacity in the proposed area of research.

3.   PROJECT GOAL AND SPECIFIC OBJECTIVES

The overall goal should state the development goal being pursued by the research. The specific objectives should indicate the specific types of knowledge (or other outputs) to be produced/realized, the audiences to be reached, the forms of capacity to be reinforced, and the partnerships to be established. These are the objectives against which the success of the project will be judged.

4. PROJECT METHODOLOGY/ APPROACH

Explain how each specific objective will be achieved in sufficient detail to enable an independent scientific assessment of the proposal. This section should show how the research questions will be answered in the most rigorous way possible. You must be clear about the activities envisaged to achieve each objective. The methodology (which should be justified) should discuss the following details as appropriate:

- **Conceptual and theoretical framework**. Define the frame of reference that will guide the research (for more on this see section on innovation systems).

- **User participation**. Indicate whether (and if so, how) the ultimate users of the research findings (in this case, the private sector) were involved in the design of the project and how they will participate in the execution of the project or implementation of the results.

- **Data collection.** Indicate the approaches and methods that will be used to collect data as well as

how the research instruments will be developed. If the research includes studies on human populations, indicate how ethical questions relating to confidentiality will be achieved (see below). Where applicable, details must be provided with regard to the collection and handling of biological samples, and all laboratory procedures and protocols must be stipulated.

- **Data analysis.** Describe the methods of data analysis and modeling to be used, if any. This should include any statistical processes/ softwares (if necessary) as well as how the data will be secured, accessed, shared, stored and archived.

5.   ANTICIPATED OUTPUTS AND OUTCOMES

Define the major outputs (e.g., publications, policy briefs, books, technologies, protocols, guidelines, etc.) expected from the research (please be **specific**.). Based on these outputs, define the outcomes expected. Outcomes are defined as changes in actions, behaviours, and relationships of the users and target audiences. What is likely to change as a result of research findings, to whom, when and where? Describe whether the project findings are likely to influence policy and at what levels (national, regional?) How will the project engage with policy and decision actors at these levels?

6. KNOWLEDGE UTILIZATION AND DISSEMINATION PLAN

Describe how the research findings will be disseminated or used. Who are the target audience/ beneficiaries? How will the findings be used to influence policy and practice? What media engagements plans are envisaged? Is open access (OA) part of your university's/institute's policy? Relate the specific dissemination method/approach to the target audience and briefly explain the rationale for the choice of the approach.

7. PROJECT GOVERNANCE

Briefly explain how the project will be governed. Describe whether the project plans to incorporate advisors to provide overall oversight. What is the composition of the research team, their qualifications and specific roles in the proposed project? Is any partnership planned with other universities/ research institutes in your country (if the focus is national); or in other countries (if the focus is regional)? How will the private sector and other beneficiaries be involved in the design/ management/ execution of the project? What is the role of the university's/institute's management (if any) and how might this governance structure influence the success of the programme?

8. SUITABILITY OF THE HOST INSTUTUION

Describe the suitability of your institution in coordinating this project by highlighting the specific factors that make it uniquely qualified. Provide an overview of the technical infrastructure, human capacity, and other resource endowments that demonstrate the existing capacity to undertake the proposed research. Explain the institution's previous/ current activities, outreach and impact in the proposed area. Describe any existing or anticipated links with the **private sector** and other actors in the country/national system. Briefly demonstrate how this project will fit into the overall design of the university's/institute's overall research strategy.

9. CAPACITY BUILDING

Describe how the project plans to contribute towards both individual and organizational capacity building. How might post-graduate students (MSc. and PhD) be involved in the project? What other training activities are envisaged under the project? Are their plans to enhance the capacity of project partners (and if so, in what areas)?

10. MONITORING AND EVALUATION STRATEGY

Describe the monitoring and evaluation strategy approach that the research team will use for monitoring and evaluation of the research project.

11. GENDER, ETHICS AND SUSTAINABILITY

Describe how ethical approval will be obtained, if applicable. All projects that include human subjects must ensure that their privacy, dignity, and integrity are protected. Projects that will collect corporate or personal information must detail how informed consent will be obtained and confidentiality maintained.

Carefully describe the links of the proposed project to ongoing projects within the institution (regardless of whether these projects are undertaken by the PI). If the project builds on other funded projects, then provide accurate and verifiable information about the funding sources and whether the proposed activities are new. Explain how the project will be sustained beyond the project support. Are any donor partnerships anticipated, and if so, which ones? Provide details of any ongoing discussions with other funders, if applicable.

Identify the key risks that may arise during the implementation of the proposed research and how each will be addressed. For each potential risk, outline the key assumptions and a mitigation plan.

12. PROPOSED PROJECT TIMELINE

Provide a chart of key activities and timelines as below

Project Activities	Year 2024				Year 2025			
	Sept	Oct	Nov	Dec	Jan/Feb	Mar/Apr	May/Jun	Jul/Aug