

Call for Proposals

Research and Innovation Grants in Computer Science and Information Systems 2024/2025

KENET's Research and Innovation Grants Overview

KENET has as one of its mandates, the role of catalyzing collaboration in research and education among member universities and research institutions. KENET promotes collaboration through facilitation of Special Interest Groups (SIGs) in priority academic areas, discovery of active researchers/faculty, provision of research and innovation grants to researchers and member institutions, as well as travel grants for faculty and/or graduate students in SIG areas.

This Call for Proposals for the Computer Science and Information Systems (CS/IS) Research and Innovation Grants is intended to promote early-stage CS/IS research and development in current and emerging research areas, as well as strengthen the CS/IS SIG. The Research and Innovation grants target early-stage researchers, enabling them to undertake proof-of-concept work to support R&D ideas and concepts. It is envisioned that the Research and Innovation grants, which are ideally targeted at junior faculty, will position recipient researchers in good footing to further their research and expertise in these areas, and subsequently attract more research funding.

Through this round of funding, KENET hopes to not only support individual research teams, but to facilitate institutional collaboration and formation of communities of practice in the research areas of focus, leading to enhanced research capacity in member institutions.

CS/IS Research and Innovation Grant: Areas of Focus

This round of funding covers two areas – NLP for low-resourced Kenyan Language(s) and Educational Technologies for enhancing computer science pedagogies, as detailed below. Researchers are encouraged to leverage the frontier technologies of Artificial Intelligence, Internet of Things and Big Data, as applicable, in their proposals:

1. Research in Computer Science and Information Systems - Natural Language Processing for low-resourced Kenyan Language(s)

We seek proposals that address language technology needs for low-resourced Kenyan languages, with the aim of enhancing the use of these languages in emerging technologies such as generative AI. For this call, we encourage work focusing on any Kenyan language with the exception of Kiswahili which is slightly more resourced than other local languages. Proposals that demonstrate how to leverage existing tools and resources to adapt NLP resources and tools for a new local language with reduced effort are encouraged.

2. Enhancing Teaching of Computer Science and Information Systems Courses: Use of technology for the effective teaching and learning of fundamental computer science competencies

A solid grasp of core computer science concepts and competencies is critical for students as they progress through their studies, and as they navigate a rapidly changing technological landscape. Ensuring that students master these competencies is now more urgent than ever. With this theme, we seek proposals that demonstrate how computer science faculty can leverage technology to implement innovative and scalable pedagogical approaches and/or resources for the teaching and

learning of fundamental computer science competencies for undergraduate students. This could cover development of open educational resources, techniques for automated assessment of fundamental competencies at scale, learning personalization and so on. The proposal should detail clearly how the proposed approach will be evaluated for effectiveness when adopted at scale, and more importantly, how the proposed approach translates to improved learning outcomes for the computer science competencies targeted by the proposal.

CS/IS Research and Innovation Grant: Structure and Schedule

Research and Innovation Grant Structure

1. Five (5) Research and Innovation grants will be awarded for the 2024/2025 round of funding – two for each area of focus.
2. Each Research and Innovation grant will be for a maximum of KES 1,500,000.
3. The grant period is 12 months.

Schedule:

Table 1: Grant Call Timeline

Activity	Dates
Call for proposals open for submissions	December 2024 – February 28, 2025
Review and evaluation of received proposals	March 3, 2025 to March 14, 2025
Face-to-face presentations of shortlisted applicants	End of March 2025
Finalists announced and grants awarded	Early April 2025
Grantees on-boarding	Early April 2025
Implementation period	May 2025 to April 2026
Evaluation, reporting and close-out	April – May 2026

CS/IS Research and Innovation Grant: Eligibility, Terms and Conditions

Eligibility

The research call is open to computer science or information systems faculty (who are full-time) at any of the KENET member institutions. Applicants must be PhD holders, having received their PhD within the past five (5) years, and must demonstrate active research interest.

The call for enhancing teaching with appropriate educational technologies is open to faculty / researchers who obtained their PhD over five years from date of this call and who have remained active in teaching computer science and/or information systems courses in the past five years. Evidence of engaging teaching materials and/or laboratory exercises developed in the last five years shall be required.

Team Composition

The lead researcher(s) must be a PhD holder meeting the eligibility criteria above. The lead researcher is at liberty to incorporate other researchers into the team as needed. If other members

are incorporated into the team, then the roles and extent of involvement of these team members must be clearly spelt out. A Letter of Commitment from each Team Member with support from respective Heads of Department or Deans, must be included as part of the team's submission documents. In this letter, each organization or individual must submit in writing, their commitment to participate in project activities, specifying their exact role in the project. Teams with multidisciplinary backgrounds are encouraged. The lead researcher will serve as the team leader and the primary point of contact for the team on all matters related to implementation of the grant.

Student Involvement

One of the main objectives of this research and innovation grant is to develop expertise and build capacity in the areas of focus, and to grow a community of practitioners. To this end, it is important for faculty to work closely with students with a view to furthering their knowledge and capacities in the various technologies and issues of interest, in the area of focus. Incorporating students, and especially PhD students, as team members as well as designing student-level projects from the research activities to be undertaken is encouraged.

Collaboration and partnerships

To enhance research uptake and utilization, it is important for researchers to identify and seek out collaborations and partnerships with strategic persons and institutions. This not only opens up pathways for moving research from the lab to the society, but also enhances visibility of researchers and their institutions, attracting even more funding and opportunities to further their research agenda.

Intellectual Property

Intellectual property derived from the funded R&D activities will be appropriated and protected based on the lead researcher's institution's IP policy and procedures.

Post-Award Requirements

The successful grantees will be expected to:

1. Provide quarterly progress reports to the CS research associate at KENET
2. Participate and present project work at selected meet-ups organized by KENET
3. Grow a community of researchers in the area, by reaching out to other local researchers working in the area and other related multidisciplinary domains
4. Actively seek post research and innovation grant funding to further their research work by writing (joint) funding proposals
5. Prepare a final project report at the end of the grant period and submit to KENET. Prepare an abridged version of the project report for profiling on KENET's and institutional websites.
6. Publish paper(s) on their work in reputable journals.

CS/IS Research and Innovation Grant: Proposal Submission

Proposal Format

1. The proposal should not exceed 6 pages (12pt, single spacing, excluding appendices)
2. The proposal should be submitted in PDF format
3. The domain in which the research area is focused should be clearly indicated in the title page i.e. NLP or EdTech.
4. No personal identification (names) or institutional affiliation should be included in the concept note.

Proposal Structure

The concept note should have the following structure:

1. Title
2. Problem definition and justification
3. Proposed solution and justification
4. Methodology
5. Resources (human, hardware, software etc.)
6. Work plan (not exceeding 12 months in duration)
7. Detailed Budget (not exceeding KES 1,500,000)
8. Appendices

Supporting Documents

The following documents should be included as part of the proposal submission:

1. Team profile document, indicating the names, institutional affiliation and brief biographies of the lead researcher(s). Details of other team members and any collaborating institutions should also be included in the team profile.
2. CVs of the lead researcher(s), clearly profiling research activities undertaken to date as well as relevant publications.
3. Letters of Commitment from team members and any collaborating institutions.

Proposal Submission.

Proposals with all supporting documentation should be sent via email to csisgrants@kenet.or.ke on or before **February 28, 2025 5.00 PM East African time**

Enquiries and applicant support

All enquiries and requests for further information related to this call should be addressed to grantsadmin@kenet.or.ke.

CS/IS Research and Innovation Grant: Proposal Evaluation

1. KENET will constitute a review panel of leading CS/IS experts. Members of the review panel will sign Non-Disclosure Agreements, as well as statements acknowledging that they will make no claim to the intellectual property developed by the grantees.
2. The reviewers will review all received applications as per the evaluation criteria provided in Table 2 below and select the top 6 proposals.
3. These top six (6) finalists will be invited for a final face-to-face presentation. During the oral presentations, the applicants will respond to and clarify any questions from the panel that will have arisen out of their written submissions. They will also be required to respond to any ad-hoc questions arising from the oral presentation.
4. After the oral presentations, the reviewers will make their final decisions on which three proposals will receive the CS/IS Research and Innovation Grant. Three (3) teams will be selected. Selected grantees will be notified formally and profiled on KENET's website.

Table 2: Evaluation Criteria

Evaluation Criteria	Evaluation Aspects	Weighted Score
Relevance and justification of proposed research topic	Is the proposed topic and preferred solution aligned with Kenya’s Big 4 agenda, Vision 2030 or SDGs? Is it an important problem to solve in a developing world context? Is there sufficient research uptake and utilization potential for the proposed research outputs?	10%
Technical Approach and Methodology	Is the research concept innovative and effective compared to existing alternatives? Does it have the potential to disrupt current practices and approaches? Does it have transformative potential? Is it feasible? Is it viable? Is it sustainable? Is the proposed implementation methodology technically sound, adheres to best practice and appropriate for the local context? Has it been optimized for efficiency? Is the proposed work doable given the time and budgetary constraints of the Research and Innovation Grant, considering the team’s composition?	35%
Viability assessment and Scaling potential	Is Scale built into the solution? Can it be replicated in similar contexts? Is the solution viable given the operational context? Is there scope for furthering the research idea/prototype? Is there scope for future external research funding in order to scale-up the research?	15%
Human capacity	Does the team have the required expertise, experience and necessary contacts to deliver? Do they have a local footprint?	15%
Awareness of and strategies to address/comply with policy and regulatory requirements	Does the team demonstrate sufficient actionable knowledge on the policy and regulatory environment that could impede or catapult utilization of research outputs? Have appropriate strategies to address policy or regulatory impediments been considered and/or designed?	5%
Student engagement	Are there concrete roles and responsibilities for student team members? Are there clearly defined student-level project ideas?	10%
Stakeholder buy-in	Have critical partnerships in the main domain of application been identified? Is there likelihood for collaboration during and after the grant period? Does lack of partnerships severely impede the research work during the grant period?	5%
Potential for publication in refereed journals and/or conferences	Are the results likely to be published in IEEE or equivalents journals / conferences that are indexed in Elsevier Scopus database?	5%