AI GOVERNANCE PILLAR RESEARCH GRANT CALL 2021

1. About the AI Governance Pillar and Research Programme

1.1. The mission of the AI Governance pillar of AI Singapore is to ensure that AI algorithms, techniques, models, systems, and solutions are built and used in ways that benefit humanity by ensuring that AI can be and will be trusted.

1.2. The AI Singapore AI Governance Pillar Research Grant supports research projects on a competitive basis across Singapore-based Institutes of Higher Learning (IHLs)[1] and Research Institutions (RIs)[2].

1.3. The objective of the Programme is to seed high-quality research efforts aimed at furthering our understanding of trustworthiness of trust in AI such that potential for harm can be eliminated (or at least minimized) while the potential benefits to humanity can be maximized.

1.4. Output of the research will eventually contribute to frameworks, policies, technologies that further the mission of ensuring that AI are built and used in ways that benefit humanity. The outputs will also contribute to the other pillars of AI Singapore.

1.5. Research ideas at the intersection of multiple disciplines are encouraged. The theme of the proposed research programme must be motivated by an important need or problem to be solved, rather than solely curiosity-driven. AISG Governance Research Grant Call 2021 aims at funding multi-disciplinary research reflecting novel ideas/visions that are underexplored, and/or also have a clear and significant social impact.

2. Grant Call Themes

2.1. AI Singapore invites proposals in advanced research focusing on the following themes:

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[1] _Institutes of Higher Learning (IHLs)_: National University of Singapore (NUS), Nanyang Technological University (NTU), Singapore Management University (SMU), Singapore University of Technology and Design (SUTD), Singapore Institute of Technology (SIT), Singapore University of Social Sciences (SUSS).

[2] _Research Institutions (RIs)_: A*STAR Research Institutes and CREATE entities

i. **Theme One: Trustworthy AI - Should we trust AI?**

Transformative technology offers tremendous opportunities but raises ethical concerns and the potential for harm. We invite research that mitigates the risks of AI through promoting fairness, accountability, transparency, ethics, and safety. Governance is broadly understood to include laws, markets, networks, standards, and other tools.

ii. **Theme Two: Trust in AI - Will we trust AI?**

Utilisation of AI will be enhanced by faith that the end-to-end process is robust and accountable. We invite interdisciplinary research into understanding the factors that shape perceptions of human-machine interaction, influencing the adoption of beneficial AI.

2.2. Research Areas:

i. Proposed research areas include (but are not limited to) those outlined on the AISG AI Governance website here.

ii. AI Singapore is particularly interested in seeing proposals that bring non-traditional perspectives to bear on questions of AI Governance, for example from the humanities and social sciences. This might include perspectives from anthropology, communications, economics (including behavioural economics), education, law, neuroscience, philosophy, political science, psychology, sociology, among other fields. Technical proposals are also welcome, but those with an interdisciplinary focus are more likely to be supported.

2.3. Proposals are encouraged that build on existing work in this broad area but bring a regional focus to bear. This might include examining the impact of different histories/cultures/social institutions on the broad questions of AI governance.

2.4. All proposals should focus on a specific question and have a clear research focus.

3. Funding Support

3.1. The Programme will support each project for a duration of up to 3 years. Funding for each proposal will be capped at a maximum of S$ 500,000 for single Principal

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Investigator (PI) projects and S$ 1,500,000 for multi-PI/discipline/institution projects (inclusive of 30% IRC).

	Funding (inclusive 30% IRC)	**Category**
Tier 1	$ 500,000	Single PI
Tier 2	$ 1,500,000	Multiple PI Inter-Disciplinary Inter-Institutional

3.2. The proposal should be based on a realistic budget with appropriate justifications that correspond to the scope of work to be accomplished. The total cost of each project includes all approved direct costs[3] and indirect research costs/overheads[4]. All expenditure budgeted should be inclusive of any applicable Goods and Services Taxes (GST) at the prevailing rates.

3.3. Please refer to **Annex A** for Guidelines for the Management of Competitive R&D Grants under AI Singapore Programme, including the list of "Non-fundable Direct Costs".

3.4. For all direct cost items proposed for the project, please note that:

  i. Host Institutions must strictly comply with their own procurement practices;
  ii. Host Institutions must ensure that all cost items are reasonable and are incurred under formally established, consistently applied policies and prevailing practices of the host institution; and
  iii. All items/services/manpower purchased/engaged must be necessary for the R&D work.

3.5. PIs/Co-PIs/host institutions shall use reasonable efforts to employ or otherwise engage Singapore citizens and/or Singapore Permanent Residents to be deployed

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[3] Direct costs are defined as the incremental cost required to execute the project. This excludes in-kind contributions, existing equipment and the cost of existing manpower as well as building cost. Supportable direct costs can be classified into expenditure on manpower (EOM), expenditure on equipment (EQP), other operating expenses (OOE), overseas travel (OT) and research scholarship (RS).

[4] Indirect costs are expenses incurred by the research activity in the form of space, support personnel, administrative and facilities expenses, depending on the host institution's prevailing policy. Host institutions will be responsible for administering and managing the support provided by AI Singapore for the indirect costs of research. This will not be applicable to research scholarship.

in the work under the project.

4. Eligibility Criteria

4.1. At the point of application, PI must fulfil the following requirements:

   i.   Hold a full-time appointment[5] in a Singapore-based Institute of Higher Learning (IHL) or Research Institution (RI); and
   ii. A track record of leadership ability in coordinating research programmes and providing mentorships to research team, as well as having productive research outcomes.

4.2. At the point of application, Co-PIs must fulfil the following requirements:

   i.   Hold a full-time appointment in a Singapore-based Institute of Higher Learning (IHL) or Research Institution (RI).

4.3. Researchers from Medical Institutions[6], AI Start-ups in Singapore, private sector and other entities are eligible to apply as Collaborators.

4.4. Only research conducted in Singapore may be funded under the Programme. Please refer to **<u>Annex C</u>** for the AI Singapore Terms and Conditions of Research Funding.

5. Selection Process and Evaluation Criteria

5.1. Proposals will be evaluated by the AI Governance Pillar Scientific Committee of AI Singapore. Proposals are selected based on academic significance, international excellence, novelty and societal impact.

   i.   **Academic significance in the relevant research fields.** This could be demonstrated in terms of the conferences and journals in which the research team intends to publish.
   ii. **Novelty of research directions** that challenge current understanding or provides pathways to new frontiers.

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[5] Defined as at least 9 months of service a year based in Singapore or 75% appointment.
[6] Researchers from Medical Institutions in Singapore who hold at least 25% joint appointment in a Singapore-based Institute of Higher Learning (IHLs) and/or Research Institution (RI) may apply as PI or Co-PI. If awarded, the grant will be hosted in the IHL/RI.

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iii. **Social impact.** This could be demonstrated through relevance to policy and practice concerning AI governance and larger questions of trust in AI.

5.2. **Multi-disciplinary and/or strong international collaboration proposals** will be favourably considered.

5.3. All decisions are **final** and no appeals will be entertained.

6. Grant Call Timeline

6.1. The schedule for the AI Governance Research Grant Call 2021 is as follows:

Event	Dates
Announcement of the Grant Call	3 November 2021
Opening date for softcopy submission	3 November 2021
Closing date for softcopy proposal submission (via portal)	11 January 2022
Evaluation and selection of proposals	January – April 2022
Release of outcome and award	End April / Early May 2022
Project commencement	1 July 2022

7. Application / Contact

7.1. The AI Governance Research Application Portal for full proposal submission is available from 3 November 2021, 12pm on https://grantportal.aisingapore.org/, alternatively, it is also accessible through https://aisingapore.org/ai-governance/.

7.2. Interested applicants should submit the AI Governance Research application form with all the sections duly filled by the stipulated deadline in two formats:

   i. Input values through the portal fields, and;
   ii. AI Singapore Application Form (PDF) and Annexes (PDF) in ZIP form

7.3. Only complete applications with the endorsement of the relevant institutional authority / director of research (or equivalent), will be accepted by AI Singapore.

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7.4. There is no quota imposed for institutions or principal investigators. In other words, each institution may submit multiple proposals and each principal investigator may also submit multiple proposals.

7.5. Late submissions or submissions from individual applicants without endorsement from the relevant institutional authority / director of research (or equivalent) (by the deadline stipulated above) will not be entertained.

7.6. For more information, please contact governance@aisingapore.org.

8. Instructions to Applicants & Host Institution

8.1. Please note that respective institution's application deadline may differ from AI Singapore's portal deadline.

8.2. PI and Co-PIs are required to provide their Google Scholar profile in the application form (not mandatory for Collaborators) and are expected to commit a proportionate amount of their time in ensuring the success of the project (at least 20% of the total time for PI and at least 10% for Co-PIs).

8.3. Please note the following instructions on specific information to be provided in the relevant sections of the application form:

8.3.1. Section 1 - Cover Sheet

This section should clearly state the time commitment of each team member (PI/Co-PIs and Collaborators). All PIs and Co-PIs must provide their Google Scholar profile.

8.3.2. Section 2 – Details of Research Proposal

A full proposal with a limit of 10 pages in size 11-point Arial font with full justified margins, single-line spacing. **Applications failed to follow the prescribed format may be rejected without a review.**

The case for support should include the following sections and information specified in the following table:

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Sections Required	Information to be Provided
Lay Abstract	Maximum of 500 words summarizing the project proposed, written for the understanding of individuals not trained in the scientific field. This abstract should be written in relatively simple and non-technical language.
Research Objectives	This section should articulate clearly the use-inspired objectives and expected outcomes of the project.
Proposed Approach, Project Plan, Role of Team Members	• Details should be provided on the scientific challenges to be addressed and the proposed methodology/approach to solving these challenges. • PI/Co-PIs should highlight in this section the importance of the problems being addressed, how their work would create new knowledge or advance existing understanding, the novelty of their proposed approach and the potential for this to produce breakthrough work. • Explanation on the financial and human resources required to accomplish the objectives, the project schedule and the mitigation of risks should be included. • The PI, Co-PIs and other team members should also be identified in this section, highlighting any competitive advantages of individual members in terms of unique capabilities and/or experience relevant to the project's focus. • This section should also be used to highlight the international competitiveness of the work being carried out in terms of merit with mentions of existing work being carried out by other teams around the world.
Outcomes and Deliverables	• A summary of the deliverables and outcomes for the project should be provided in this section. KPIs proposed should be linked to the objectives of the project and should be as quantitative as possible (e.g. learning from 5 times fewer labelled samples, etc.) – as a means to track/measure the success of the project at mid-term and at completion. • PIs should also use this section to highlight important potential/possible future outcomes from the successful execution of the project. • The detailed listing of KPIs should be provided in Section 5 of the application form.

8.3.3.   Section 3 – Proposed Budget

PIs should fill in the detailed budget breakdown in this section of the form, broken down into the categories and sub-categories, mainly:

    i.   EOM;

   ii.   Equipment;

  iii.   OOE, with sub-categories for local conferences/ working visits/ meetings, materials and consumables (including animal costs if any) and miscellaneous costs or others;

  iv.   Overseas Travel (OT), including overseas conferences/ working visits/ meetings. Any additional information (e.g., equipment quotations, OOE details, etc.) should be provided as separate attachments. Further line item breakdown is required in sub-section (B). Only details for the amount of funding sought under AI Singapore should be provided in this section; other sources of funding for the project should be indicated separately and clearly in the "Other Funding Support" section for AI Singapore's information. Please refer to Annex A for the list of direct cost items (non-exhaustive) that are non-fundable under AI Singapore;

   v.   Research Scholarships (RS). Note: RS category is not eligible for indirect costs.

8.3.4. Section 4 – Declaration of Other Funding Support

Details of all grants currently held or being applied for by the PI and Co-PIs listed on the cover page, in related areas of work, must be declared in this section.

Failure to do so will be considered a breach of the undertaking required by all PI and Co-PIs in Section 6 of the application form and may render the application invalid. Please refer to **Annex C** in the application form for reference.

8.3.5. Section 5 – Performance Indicators

PIs should provide full details of the KPIs for their project.

8.3.6. Section 6 – Names of Suggested International Reviewers
8.3.7. Section 7 – Declaration by Grant Applicants
8.3.8. Section 8 - Endorsement by the Host Institution

8.3.9. Annex A – Project Implementation Schedule

PIs should provide full details of the project implementation schedule.

8.3.10. Annex B – Curriculum Vitae

2-page CVs of all PI, all Co-PIs and Collaborators listed on the cover page must be provided according to the format provided.

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8.3.11. Annex C – Declaration of Other Funding Support Supplementary

 PIs should provide details of other funding support.

8.4. Proposals submitted should contain all relevant information required for a proper and complete evaluation of their merits without the need to go back to applicants for additional information. Relevant privileged or confidential information should be disclosed if necessary to help convey a better understanding of the proposed project. However, such information should be clearly marked in the proposal.

8.5. Appendices should contain supporting diagrams, references and Gantt chart to illustrate the points mentioned in Section 2. However, **elaboration of proposals' contents within appendices will not be reviewed.**

8.6. A complete set of signatures may be provided using multiple copies of Section 7 (the undertaking section) of the application form. The softcopy submission will be taken as the final and complete version of the proposal.

8.7. Submissions which are incomplete (e.g., missing Google Scholar profile, missing host institution endorsement) or not received by the close of the relevant call will not be considered.

8.8. Research support office from the IHLs and/or Research Institutions are required to ensure that information submitted by their researchers complies with the requirements outlined in the application guideline. **The following will be rejected without review**:

  i. Missing or wrong version of application form.
  ii. Inappropriate format (e.g., small font size and tight para spacing) or incomplete applications (e.g., sections left blank, missing CVs, etc.).
  iii. Late submission.
  iv. Revisions, made after closing date.
  v. Proposal not within theme/scope
  vi. Duplicates of proposal submitted to any other public funding agencies for simultaneous consideration.
  vii. Ineligibility of PI and/or Co-PIs.

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8.9. PI and Co-PIs should note that **parallel submissions are not allowed** – i.e. applicants **must never send** similar versions or part(s) of the current proposal application to other agencies or grants for funding (or vice versa).

8.10. The budget for the research proposal should be prepared according to the guidelines stipulated by the AI Singapore Research Programme and the applicant's host institution/research institute.

9. Terms & Conditions of Award

9.1. Funding from AI Singapore will be awarded to and managed by the Host Institution of the PI and/or Co-PI. No part of AI Singapore funding will be awarded to Collaborator(s).

9.2. The detailed terms and conditions applicable to the grant are specified in the document, entitled "Terms and Conditions of the AI Singapore AI Governance Programme", that will be attached during the award.

9.3. AI Singapore will disburse funds on a reimbursement basis. Host institutions shall submit requisitions for direct and/or indirect costs for which the funding is permitted to be used to AI Singapore on a half-yearly basis using the forms provided. Requisitions shall include detailed schedules of expenditure incurred for the previous period, as certified by its chief financial officer or an authorised nominee.

9.4. No funds shall be disbursed for approved projects unless:

   i. The relevant research collaboration agreements (where applicable) have been signed. The respective research compliance approvals (where applicable) have been obtained from the appropriate board/office.

   ii. Funding from AI Singapore will be awarded to and managed by the host institution of the PI and/or Co-PI. No part of AI Singapore funding will be awarded to Collaborator(s).

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ANNEX A: GUIDELINES FOR MANAGEMENT OF RESEARCH GRANTS (AI SINGAPORE)

ANNEX B: INSTRUCTIONS TO INSTITUTION'S APPOINTED AUDITOR ON FINANCIAL AUDIT (GOVERNANCE)

ANNEX C: AI SINGAPORE AI GOVERNANCE RESEARCH TERMS AND CONDITION

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