Proposals for AIDA pilot projects for SCAPIS

Analytic Imaging Diagnostic Arena (AIDA) is a national arena for research and innovation on analytic image-based diagnostics. AIDA is a cross-disciplinary and cross-sectoral collaboration aiming for large-scale usefulness from Artificial Intelligence (AI) in healthcare. The arena scope includes tailormade IT systems and relevant human expertise, firmly rooted in a realistic healthcare environment. AIDA is part of the national Strategic Innovation Program Medtech4Health, a joint initiative by VINNOVA, Formas and the Swedish Energy Agency. More information can be found at medtech4health.se/aida.

A main part of the AIDA initiative is to host efforts from the entire country, aiming to contribute to development and adoption of AI methods in imaging diagnostics. We hereby announce an opportunity to participate in AIDA with innovative development projects working on data from the SCAPIS project.

Pilot project opportunity

AIDA welcomes proposals from groups of researchers in Sweden, from both academia and industry, that aims to develop AI-based decision support methods for imaging diagnostics, using data from SCAPIS. Proposals are expected to include one or more components of: analysis method development, annotation method development, and method evaluation by clinical staff. A close collaboration with clinical counterparts is required. AIDA funds can be used for healthcare staff, either within the pilot project itself, and/or through a connected AIDA clinical fellowship.

Apart from method development, the purpose of the pilot projects is also to validate an AI lab environment for sensitive personal data that SCAPIS and AIDA are building, with the goal to provide a secure and easy-to-use platform for future AI research on SCAPIS data. Therefore, the pilot projects will be required to perform substantial parts of their AI training in the provided lab environment, centered on the AIDA DGX-2 compute service. Central AIDA resources will be available to adapt the environment when obstacles are encountered.

The expected total size of each project proposal is about 500 kSEK. The total budget for the SCAPIS pilot projects is 1 MSEK (of which 500 kSEK is funded by Vinnova), thus, AIDA expects to host two pilot projects.

SCAPIS-related details

A detailed description SCAPIS data is found in Bergström et al., JIM, 2015 (link). The SCAPIS data made available to the AIDA pilot projects are computed tomography imaging with lung, cardiac and fat depot imaging. Image data from 500-1000 participants can be made available in this pilot phase. The applicant should give a rationale for the number of datasets needed for the project.

A condition for data access is that new data generated by the pilot project is to be shared with SCAPIS, and, in turn, with other researchers.

For pilot projects that are accepted, the following requirements then need to be fulfilled: The applicant needs to file an application for data at scapis.org. The SCAPIS organization has committed to accepting these applications. While initial work in the pilot projects are covered by existing ethical approvals, the applicant needs to get approval from the Swedish Ethical Review Board (Etikprövningsmyndigheten) for the project before publication of any data.

Terms

The maximum level of funding from AIDA/VINNOVA is 50% of the project cost. In addition, each project will be entitled to a free-of-charge allotment of AIDA’s central resources for computation and storage. The project should start at the latest May 3, 2021 and end at the latest Apr 30, 2022.

Project proposals will be evaluated according to three groups of meriting criteria:

- Potential
A foundational part of AIDA is knowledge exchange with all AIDA partners, why it is mandatory that the project represented with on-premise participation at the “AIDA Days” workshops: typically, lunch-to-lunch events organized approximately eight times per year. In addition, each individual with substantial effort in the project must participate at AIDA Days at least once during the project. (Physical meetings can be replaced by virtual events, for instance due to the Covid-19 pandemic situation, then participation requirements are the same but the on-premise requirement does not apply.)

In addition to the AIDA-specific rules, general VINNOVA terms apply for allowed cost types, cost levels, funding levels etc. The costs are defined according to the general VINNOVA standard, a full description is found here (in Swedish): Guide om stödberättigade kostnader.

Application procedure

Proposals should be described using the templates available on medtech4health.se/aida. The proposal is submitted to the Arena Director at aida-director@medtech4health.se. Incoming proposals are then refined in a dialog with the Arena Director. After the dialog, the Arena Director brings the finalized proposal to the AIDA Steering Group for decision. The proposing party is entitled to request decision from the Steering Group even if the Arena Director does not consider the proposal finalized. The AIDA Steering Group reserves the right to award a smaller amount of funding than what a proposal asks for or to make part of the funding dependent on a specific condition.

Please note that if a proposal is submitted close to the deadline, there is little time for dialog regarding the proposal. Therefore, we recommend submitting a first version well in advance of the deadline. Also note that AIDA will accept high-quality proposals until the budget is reached, which may mean that planned occasions may be cancelled, or that additional occasions will be opened.