

ADAS Advanced Engineering Machine Learning for Autonomous Driving Projects Call

1. Scope:

- Collaboration with university experts in Machine Learning for a research project in the autonomous driving domain. One grant will be awarded by ADAS AE, in the conditions specified in this project call.

2. Objectives:

- Increasing the collaboration between ADAS AE and university researchers.
- Doing research in machine learning for autonomous driving relevant for ADAS AE.
- Closing the gap between research done in the university and research done by the ADAS AE team.

3. Estimated results:

- By financing such a project, ADAS AE will benefit from the expertise of researchers from the university.
- Scientific papers will be published, that will increase the visibility of Timisoara as a competence center in machine learning for autonomous driving research.
- Competence will be formed for the members of the team from the university, who could then have other collaborations with the ADAS AE team.

4. General conditions for participation

- The directors of the projects should be university researchers who have a Ph.D. in Computer Science/Electronic Engineering/Electrical Engineering, and who have done relevant research in Machine Learning/Deep Learning/Neural Networks in the last two-three years.
- The project team will be formed by the project director, and other researchers or Ph.D./master's/bachelor's students from the same university as the project director. There is no restriction on the number of members in the team.
- The competition will be coordinated by the ADAS AE team, represented by its group leader.

5. Eligibility criteria

- The directors of the projects should be university researchers who have a Ph.D. in Computer Science/Electronic Engineering/Electrical Engineering, and who have done relevant research in Machine Learning/Deep Learning/Neural Networks in the last two-three years.
- The project theme will be machine learning for autonomous driving applications. Only one proposal can be made by one project director.
- No projects that are already financed or are expected to be financed can be entered in the competition.
- The project director has the obligation to assure the fact that the project proposal conforms with Legea nr. 206/2004 regarding good conduct in scientific research, development technology and innovation, with subsequent modifications and completions, as well as other ethical legislative regulations specific to the field of research of the project.

6. Duration

- The duration of the project is 6 months, starting from December 1st, until May 31st.

7. Budget

- The budget offered by ADAS AE is 10.000 EUR (equivalent in RON), which comes from the university collaborations budget of ADAS AE. As such, each project will have a budget of at most 10.000 EUR (equivalent in RON).

8. Eligible expenses

- The eligible expenses can be: direct expenses (personnel expenses, material expenses, logistics expenses), and indirect expenses (a maximum of 10% of the total value of the project).
- All the other expenses in the project regarding publishing of the results (conference fees, travel expenses, etc.) will be made from the own funds of the project team or their university.

9. Equal opportunities

- Equal opportunities and gender equality will be ensured for all participants. Applicants must take all measures to promote equal opportunities for men and women in writing and implementation of the financing request and the project. They must aim, as far as it is possible, a balance between women and men for all the positions provided in the project.

10. The project proposal

- The proposal will have the following sections:
- Section A (maximum 1 page), in which the scientific achievements of the project director are presented, which illustrate their ability to independently conduct a research project and highlight how these achievements relate to the project proposal.
- Section B (maximum 4 pages), will contain the following subsections:
- B1. *Scientific relevance*. The choice of the theme of the project will be motivated by framing the problem addressed in the current scientific context. There will be highlighted: the importance of the topic from a scientific and technological point of view, and for the autonomous driving domain; the difficulty elements of the problem; analysis of the current state of the art related to the theme of the project.
- B2. *Objectives / Activities of the project*. There will be presented: the concrete objectives of the project and the activities thereof; the elements of novelty and originality that the implementation of the project would bring to the machine learning for autonomous driving domain, related to the current state of the art.
- B3. *Results and impact*. The expected results will be highlighted, such as: the realization of models, schemes, new or improved methods, publication of at least one scientific article on the subject of the project, the aspects related to the estimated impact of the project in the context of the scientific field, highlighting: the potential to influence the scientific field through new concepts or approaches and / or through opening of new research directions; the potential impact of the project in the autonomous driving domain; any application directions that will be explored within the project.
- B4. *Methodology*. The following will be highlighted: the research methods and tools, by reference to the newest approaches in the subject area, as well as how they will be integrated; a work plan in which the proposed activities are detailed over time, describing the organization and planning of the project in relation to the proposed objectives. The role of each member of the research team in the project will be detailed. The research methodology will be presented, specifying, as far as possible, certain intermediary targets. The possible risks of the research and the ways in which these will be removed, will be mentioned. The deliverables will be described.
- B5. *Resources and budget*. The existing necessary resources in the university will be detailed. The source of the financing for the expenses not covered in the budget of the project will be mentioned. The breakdown for the hours to be paid from the project budget will be highlighted.
- B6. *Bibliography*.

11. The competition

- The project proposal will be sent by the project director, until November 26th, by e-mail to the group leader of the ADAS AE team, Tudor Nicosevici (e-mail: a.b "at" continental.com, where a=Tudor, b=Nicosevici).

12. The evaluation process

- The evaluation of the projects will be done by the group leader of the ADAS AE team, and all the applicants will receive an e-mail regarding the financing/not financing of their proposal, no later than November 28th.
- The projects will start December 1st and will end May 31st.