

General AI Challenge Offers \$5mil in Prizes to Push Limits of Machine Intelligence

February 15th, 2017- Today general artificial intelligence R&D company GoodAI launched its [General AI Challenge](#) to tackle crucial research problems in human-level AI development. GoodAI will distribute \$5mil in prizes among the various rounds of the multi-year Challenge.

The Challenge kicks off with a 6-month “warm-up” round, open to the worldwide community of researchers and programmers (both for individuals and teams).

GoodAI wants to incentivize talent to focus on developing safe and beneficial general purpose artificial intelligence. General AI is humanity’s biggest frontier and the ultimate leverage to expedite advancements in science and technology, tackle diseases, and learn more about our universe. The Challenge was presented as a “citizen science” approach to the research needed to push the boundaries of AI.

The organizers of the Challenge have partnered with *Microsoft Czech Republic and Slovakia* and *NVIDIA* to empower talented researchers and programmers who would otherwise lack computational resources for their experiments. To help develop their solutions, participants worldwide will be provided with free access to Microsoft Azure cloud space. In addition to monetary prizes, participants will get a chance to win a cutting-edge NVIDIA GPU.

The champions of the warm-up round will be free to share their solution with the world under an open license, if they decide to do so.

Why General AI?

Current AI solutions fall under the category of “narrow AI”, meaning that they have been designed, trained, and optimized by human engineers to achieve a single, specific task. Although such algorithms sometimes outperform humans in their established skillset, they are not able to extend their capabilities to new domains.

General AI, in contrast, will be capable of overcoming these limitations. Thanks to a human-level skillset, general AI will be able to learn and come up with creative solutions for a range of multi-domain tasks.

The Warm-Up Round: *Gradual Learning - Learning Like a Human*

“In our efforts to develop human-level artificial intelligence, our greatest challenge has been to create an AI that is able to learn like a human: to acquire and reuse skills and knowledge in a gradual manner,” explains Marek Rosa, CEO/CTO at GoodAI.

“This is why the first task in the General AI Challenge will be a warm-up round focused on the AI’s gradual learning capabilities.”



It will call on participants to design an AI that can fulfill two fundamental tasks: develop useful heuristics and learning strategies, and then reapply those strategies when learning new skills in new domains. Essentially, it would be capable of “learning how to learn”, allowing it to innovate solutions to new, complex tasks in less time—something state-of-the-art AI and machine learning algorithms can’t do.

Prizes

In the warm-up round, GoodAI is offering a total of \$50,000 in prize money: \$15,000 for the AI agent that performs best in an objective test (a set of evaluation tasks), and \$10,000 for the best idea (selected by the Challenge Advisory Board). The remaining prize money will be distributed among the 2nd- and 3rd-place winners in both categories.

Upcoming rounds

The plans and ideas for future rounds include:

- developing AI agents capable of gradual learning in more complex environments
- solving AI safety, ethics, security, control, and value alignment problems
- developing a futuristic roadmap dealing with social, political, and economical aspects of our future
- roadmapping general AI R&D efforts
- “School for AI”: developing curricula for teaching AI
- and many more

Multiple rounds can run in parallel.

ADDITIONAL TECHNICAL INFO about the warm-up round

Participants will be programming and training an AI agent that will engage in a dialogue with a given environment. They will exchange bytes of information, and in addition the environment will give feedback signals to the agent to guide its behavior.

- The agent should learn to demonstrate gradual learning—the ability to use previously learned skills to more readily learn new skills (and in this case, to answer questions generated by the environment).
- Participants will not be optimizing their agent’s performance on existing skills (how good an agent is at delivering solutions for problems it knows). Instead, they will be optimizing the agent’s efficiency at learning to solve new/unseen problems.

Organizers will provide participants with a set of training tasks to use as reference, implemented in [CommAI-Env](#), a simple bit-based communication environment. These tasks were designed to test the ability of gradual learning. The tasks are based on the CommAI-mini set recently proposed by Baroni et al., 2017 (<https://arxiv.org/abs/1701.08954>). After the participants submit their solution, their agent will be evaluated on similar, but not identical evaluation tasks. This way we avoid the case that the agent has been built for the given tasks only. Instead, it should possess more general ability to learn how to learn.



General AI Challenge links

Homepage: www.general-ai-challenge.org

Twitter: [@ai_challenge](https://twitter.com/ai_challenge)

Facebook: www.facebook.com/AIchallenge

Youtube channel: www.youtube.com/channel/UCh4CPIHdoXkIfiZkgi496tw

Contact email: discuss@general-ai-challenge.org

Discussion Forum: discourse.general-ai-challenge.org

About the organizers

GoodAI

GoodAI's mission is to develop general artificial intelligence - as fast as possible - to help humanity and understand the universe. The research and development company started in January 2014 with CEO/CTO Marek Rosa's personal investment of \$10M USD. Its international team of 20 research scientists and engineers is based in Prague, Czech Republic.

Homepage: www.GoodAI.com

Twitter: [@GoodAIdev](https://twitter.com/GoodAIdev)

Facebook: www.facebook.com/GoodArtificialIntelligence

Challenge advisory board

[José Hernández-Orallo](#) - Professor, Universitat Politècnica de València

[Pavel Kordik](#) - Professor, Czech Technical University in Prague

[Alison Lowndes](#) - Artificial Intelligence Developer Relations, EMEA | NVIDIA

[Tomas Mikolov](#) - Research Scientist, Facebook AI Research

[Julian Togelius](#) - Professor, New York University

[Roman Yampolskiy](#) - Professor, University of Louisville

Challenge partners

[Microsoft Czech Republic and Slovakia](#)

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[ARAYA Brain Imaging](#)

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