



**BABAK HODJAT** is the CTO for AI at Cognizant where he leads a team of developers and researchers bringing advanced AI solutions to businesses.



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## How Evolutionary AI Could Solve the World's Toughest Problems

Cognizant and XPRIZE launched the [Pandemic Response Challenge](#) in November 2020. Reflecting the urgency of the moment, two international teams won the \$500,000 prize purse less than four months later. Here, Babak Hodjat, Cognizant's vice president for Evolutionary AI, talks about the prize, the tech behind it, and the future of problem-solving.

### Q. What is different about Evolutionary AI?

**A.** It's creative in that it can actually come up with unexpected solutions, not just incremental improvements on existing solutions. That's because evolutionary computation looks at multiple solutions at the same time.

### Q. How did the XPRIZE teams find solutions for combating COVID-19?

**A.** The different teams looked at the problem with their regional priorities in mind. In other words, they based their work on what was happening in Valencia, Spain, versus Croatia versus somewhere in Africa, depending on where they were. They brought their own specific data to the table. And they used various methodologies. Evolutionary AI then allowed us to bring together all those different ways of tackling the problem and create aggregate solutions better than the sum of their parts.

### Q. How could Evolutionary AI help solve humanity's other big challenges?

**A.** We can bring various solutions from different perspectives around the world into this evolutionary AI framework. In that way, populations of solutions can come together for policymakers to apply within the context of each region.

### Q. How can organizations get started with AI-enhanced decision-making?

**A.** It's essential for them to have their endgame — their AI-enabled state — in mind as they decide what data to collect, how to collect it, and where to collect it. That way, even if they haven't fully moved to the cloud yet, or think of themselves as being at the early stages of digitization, at least they know what data they need to collect, and at what frequency, for the AI models that will drive their future business.

### Q. As organizations begin to realize the power of AI, what should they expect from IT and cloud services providers?

**A.** They need to look for someone who can help them visualize and architect that end state, and do it in a way that allows for change, because an organization's decision-making does change through time. You do not, for example, want to build a rigid simulation for your user base that can't reflect some sudden change in the market. AWS, for example, has built a comprehensive ML stack that includes frameworks and AI/ML services for vision, speech, text, and fraud detection. These services enable AI developers to easily move models between tools and choose the combination that is best suited for them. AWS also provided the XPRIZE competitors free access to their platform for building out their models.

To learn about how Evolutionary AI can help your organization solve its toughest challenges, visit [www.cognizant.com](http://www.cognizant.com).