Todai Robot Project

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ABSTRACT

"Todai Robot Project (Can a robot get into the University of Tokyo?)" was initiated by National Institute of Informatics in 2011 as an AI grand challenge. The goal of the project is to create an AI system that answers real questions of university entrance examinations consisting of two parts, the multiple-choice style national standardized tests and the written tests including short essays. The task naturally requires development of underlying technologies in the research areas including natural language processing, image processing, speech recognition, automated theorem proving, computer algebra and computer simulation. At the same time, interdisciplinary research synthesis is necessary. From 2013, our software have taken mock tests of the National Center Test every year. The result shows that its ability is still far below the average entrants of Tokyo University. However, it is beyond the average: it is competent to pass the entrance exams of two thirds of universities including 33 national universities in Japan.

Biography

Dr. Noriko Arai is a Professor of Information and Society Research Division of National Institute of Informatics since 2006. She is also Director of Research Center for Community Knowledge since 2008. She received her Ph.D degree with major achievements in theory of proof complexity from Tokyo Institute of Informatics in 1997. Her major research interests fall in the fields of mathematical logic, theory of computational and proof complexity, e-learning, knowledge sharing and artificial intelligence. Dr. Arai is known as the leader of the open source software project, NetCommons, which is used more than 3,500 schools and institutes. She won IASTED 3rd International Software Competition (2007), and was awarded NISTEP Award from National Institute of Science and Technology Policy (2009), Prizes for Science and Technology, the Commendation for Science and Technology from The Ministry of Education, Culture, Sports, Science and Technology in Japan (2010). From 2011, she has been Program Director of an AI grand challenge, Todai Robot Project (Can AI get into the University of Tokyo?). This project aims to add a new dimension to the current information technology and bring a deeper understanding of human intelligence, by setting a concrete goal: development of a software system which is able to pass university entrance exams.