Challenges in Machine Learning: Competitions & Perspectives

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Abstract

Machine learning lies at the core of AI: by building computer programs that learn from data, it aims to provide of *intelligent* behaviors to machines. In the last decade a tremendous progress in machine learning has lead to computer programs that attain human-like performance in a variety of tasks (e.g., face recognition, machine translation, speech processing). Largely, this progress has been due to academic challenges that have pushed research in selected topics and problems. In this talk, I will elaborate on the importance of academic competitions for pushing the state of the art in machine learning and related fields. At the same time, I will provide an overview of perspectives on machine learning research, focusing in research opportunities and open problems.

Short bio

Hugo Jair Escalante (http://ccc.inaoep.mx/~hugojair/) is researcher scientist at Instituto Nacional de Astrofisica, Optica y Electronica, INAOE, Mexico. Previously, he was assistant professor at the Graduate Program on Systems Engineering at UANL. He holds a PhD in Computer Science, for which he received the best PhD thesis on Artificial Intelligence 2010 award (Mexican Society in Artificial Intelligence). He was granted the best paper award of the International Joint Conference on Neural Networks 2010 (IJCNN2010). He is a director and secretary of ChaLearn, a non-profit organization dedicated to organizing challenges, since 2011. Also, he is member of the board of the CONACYT Network on Applied Computational Intelligence, regular member of AMEXCOMP and member of the National System of Researchers (SNI), level I. Since 2017, he is editor of the Springer Series on Challenges in Machine Learning. He has been involved in the organization of several challenges in computer vision and machine learning. He has served as co-editor of special issues in IJCV, PAMI, and IEEE Transactions on Affective Computing. He has served as area chair for NIPS 2016 and NIPS 2017, and has been member of the program committee of venues like CVPR, ICCV, ECCV, ICML, NIPS, IJCNN. His research interests are on evolutionary machine learning and its applications on language and vision.