

Computer Design Concepts for Machine Learning

Nader Bagherzadeh
University of California at Irvine

Facultad de Informática
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Resumen:

In this talk, after a brief overview of AI concepts in particular Machine Learning (ML) techniques, some of the well-known computer design concepts for high performance and power efficiency are presented. Subsequently, those techniques that have had a promising impact for computing ML algorithms are discussed. Deep learning has emerged as a game changer for many applications in various fields of engineering and medical sciences. Although the primary computation function is matrix vector multiplication, many competing efficient implementations of this primary function have been proposed and put into practice. This talk will review and compare some of those techniques that are used for ML computer design.

Sobre Nader Bagherzadeh:

Nader Bagherzadeh is a professor of computer engineering in the department of electrical engineering and computer science at the University of California, Irvine, where he served as a chair from 1998 to 2003. Dr. Bagherzadeh has been involved in research and development in the areas of: computer architecture, reconfigurable computing, VLSI chip design, network-on-chip, 3D chips, sensor networks, computer graphics, memory and embedded systems, since he received a Ph.D. degree from the University of Texas at Austin in 1987. He is a Fellow of the IEEE. Professor Bagherzadeh has published more than 325 articles in peer-reviewed journals and conferences. His former students have assumed key positions in software and computer systems design companies in the past thirty years. He has been a PI or Co-PI of research grants for developing next generation computer systems for applications in general purpose computing and digital signal processing as well as other related areas.