Squeezenets: Quantifiable Learning Acceleration Via Deep Knowledge Integration

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CONCEPT

TBD

APPROACH

We propose a fundamentally novel approach to adaptively design the topology of the deep learning architecture that simultaneously addresses the fundamental challenges of sample complexity and lack of generativity.

IMPACT

Despite tremendous success of deep learning technology in many applications, adoption in new domains have been slow. Current approaches suffer from immense sample complexity, lack of robustness, lack of generativity.

The proposed research will address these key issues, resulting in a deep learning prototype architecture that adaptively learns the network topolgy, with optimal integration of prior knowledge.

CONTEXT

Standard deep learning architectures often use static oligopolies, and are too complex in their connectivities to allow training with realistic sample sizes