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# Exploring Shallow Architectures for Image Classification

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Deep Convolutional Neural Networks (CNNs) have achieved remarkable success in various tasks, particularly in image classification. In contrast, Scattering Networks, a two-layer deep CNN architecture derived from cascaded complex wavelet transforms and modulus pointwise non-linearity, have shown promise but lag behind deep CNNs in terms of performance on the widely recognized ImageNet dataset In this talk, we revisit the central question that drove my Ph.D. research: "Is it possible to derive competitive representations for image classification using geometric arguments?"Although this inquiry did not yield the desired outcome, it sparked an intriguing research direction focusing on the potential of shallow architectures in tackling the ImageNet dataset. We will review these findings and discuss potential challenges in the area of shallow learning.

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