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Image Denoising: Supervised, Self-supervised, Generative

Thursday 18 September 2025 10:00 (1h 30m)

Removing imaging noise is an essential problem in scientific applications, where sensors are often pushed to the edge of what is possible. The past years have seen a range of machine learning methods proposed: supervised approaches, using image pairs to learning a mapping from noisy to clean images; Self-supervised approaches, capable of learning such a mapping from noisy data alone; and finally generative approaches capable of additionally capturing the inherent uncertainty of the problem.
In this talk will talk about how these approaches can be understood and derived from a probabilistic perspective.

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