ARTIFICIAL INTELLIGENCE

PNRR - Deep models for low-level image processing and vision

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Context of the research activity	Develop advanced deep learning techniques for low-level vision. Progetto finanziato nell'ambito del PNRR. PNRR M4C2, Investimento 1.3 - Avviso n. 341 del 15/03/2022 - PE0000013 Future Artificial Intelligence Research (FAIR) - CUP E13C22001800001
Objectives	Low-level vision problems involve partial and corrupted observations from imaging systems and require computational techniques for image recovery. Addressing these challenges is vital for efficient decision-making, automation, and productivity in Industry 4.0. This research aims to develop advanced deep learning techniques for low-level vision, including image restoration, denoising, and super-resolution, and involving diverse acquisition modalities like depth sensing, hyperspectral imaging, etc.
Skills and competencies for the development of the activity	The ideal candidate has a strong mathematical background with knowledge of deep learning and neural network methodologies. The candidate should be fluent with neural network frameworks like Pytorch or Tensorflow. Knowledge of image processing and imaging and signal processing (ISP) systems and previous experience on low-level vision problems such as image super-resolution or enhancement is highly desirable.