ImageTriage

An extensible explainable AI framework for image interpretation

Capabilities at a Glance

Modules	Capabilities		Component shape		Measurement technique	
	✅ Current Capabilities	🚀 Easily Extendable To	✅ Current Component Shapes	🚀 Easily Extensible To	✅ Current Measurement Techniques	🚀 Easily Extendable To
Detection and Characterisation of Surface-breaking and Subsurface Features	Using A-scans (presented in.txt, .csv, .dat, .png or .h5 format) to form 2D cross-sectional images of the inspected component; detect and characterise surface-breaking and subsurface cracks: fatigue, rough-surface, stress-corrosion, weld-adjacent cracks in homogeneous metals. Generate draft inspection reports.	Characterising other types of damage, reading other formats. Using data from 3D scans (e.g. in .3mf format) and CAD files	Rectangular, with surfaces plane or undulated	Cylindrical (FFS_ASSESS module already processes these)	PAUT (FMC/TFM dara) PAUT (sectorial data), any combination of two or three wave modes L and T, allowing to deal with reflections and mode conversions	Conventional mechanical scanning by single-probes in pulse-echo & pitch-catch modes (extendable since sectorial PAUTs already supported)
	Using various crosss-sectional images to locate and characterise honeycombing in cement. Generate draft inspection reports.					
FFS_ASSESS - Fitness For Service Assessment of Vessels and Pipework	Using A-scans to create corrosion maps, applying ASME & BS/EN standards to make assessments. Generate draft inspection reports		Rectangular and cylindrical, with perfect surfaces	Rectangular and cylindrical, undulated surfaces		

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