Anomaly Detection for Aircraft Engine Inspections

Aiir Innovations (https://www.aiir.nl/) is an Artificial Intelligence startup that focuses on automating the inspection of jet engines. The turbine blades inside these engines need to be inspected periodically.

Usually most of the engine blades are intact, so one way of detecting integrity issues is to detect “the odd one out” by learning a model of what a normal undamaged blade looks like. Anomaly detection in computer vision is not a trivial task, so this topic requires in-depth research. You will be building upon previous work and work on state-of-the-art anomaly detection methods, including (reversible) generative models.

More about Aiir

https://www.youtube.com/watch?v=PMxDBOMhqac
https://www.nhnieuws.nl/media/59858/Startups-in-de-Metropool-Aiir-Innovations (Dutch)

We develop software that automatically detects material surface defects such as cracks and dents in mechanical structures. Our main focus lies on turbine blades.

Our software analyses video footage and still images to assist expert mechanics throughout their inspections. It’s an additional pair of eyes that helps check for irregularities and automatically generates a digital report. This saves the mechanics time, while increasing the quality of the inspections.

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