



KEEN AI

Company: Keen-AI

Knowledge Transfer Partnership: Accelerating Infrastructure Asset Inventory with AI.

Keen AI is an innovative UK technology company using Artificial Intelligence and Machine Learning to help its clients make exceptional decisions with their visual data. This Accelerated Knowledge Transfer to Innovate (AKT2I) partnership is focused on developing automated AI inventory platform for energy infrastructure assets.

Challenge

Electricity Transmission operators are responsible for the safe and reliable operation of thousands of overhead line pylons across their networks. Single towers can be made up of many different types of components. Having a reliable asset inventory is essential to running the network cost-effectively and safely.

Operators regularly gather images of pylons during routine maintenance and inspection activity. It is not feasible to manually analyse these images, and so an opportunity exists to build an automated asset inventory audit solution using AI and computer vision techniques.

This project is a new addition to Queen Mary's Knowledge Transfer Partnership (KTP) portfolio.



Finding crucial mistakes in a company's asset records can be challenging, similar to searching for needles in many haystacks. One incorrect component in a single structure can have significant consequences for a rail or electricity operator. Despite the accuracy of deep learning models, there is still a risk of incorrect predictions, resulting in a high number of false positives and overwhelming the manual quality assurance process. Our goal in this project is to examine how leveraging uncertainties in deep learning network predictions can minimise false positives."



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