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## Machine learning-enhanced infrared imaging for temperature anomaly detection in power supplies

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The performance of particle accelerators is critically dependent on the reliability of their power supplies, which can number in the thousands in many facilities. In this work, we present a method for monitoring temperature anomalies in power supplies using infrared (IR) imaging. By applying various machine learning algorithms to the IR imaging data, we develop a reliable anomaly detection system that can improve the uptime of accelerator facilities. This approach enables early detection of potential issues, facilitating predictive maintenance and enhancing overall operational efficiency.

### Footnotes

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