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Using artificial intelligence to interpret pneumonia CXR (chest X ray) findings in children with a phone application platform

R. Thompson, J. Li, K. Wang, L. Etter, I. Camelo, I. Castro-Aragon, B. Setty, H. Chang, M. Betke, R. Pieciak, C. Gill. 2022. "Using Artificial Intelligence to Interpret Pneumonia CXR (chest X ray) Findings in Children with a Phone Application Platform"

<https://hdl.handle.net/2144/46074>

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ResNet-50 convolutional neural network to sort, process it and categorize (no pneumonia) or abnormal (pneumonia).

To minimize processing requirements, the model was optimized for mobile deployment using *Tensor Flow Lite (TF Lite) Task Lib*. Specific interfaces are designed for each task to achieve the best performance and usability when used in a simulated mobile application.

This allows the model to classify X-ray images through the App using the phones' camera.