

tinyML[®] for Good

Tiny technology for the world's biggest challenges

Pneumonia Detection using Embedded Machine Learning

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www.tinyML.org

TITLE: Pneumonia Detection using Embedded Machine Learning

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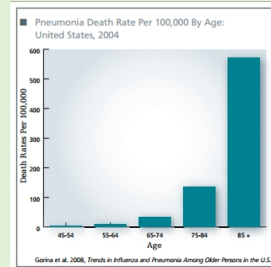
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Problem Statement:

- Pneumonia is a super common disease in the world today
- WHO says that every year around 450 M people every year get affected by Pneumonia each year, resulting in 4 M deaths



Impact:

- Superbly impactful for detection of Pneumonia in a much less time with less labour work needed
- Detection of Pneumonia can take anywhere between 24 to 72 hour, but this device can do all of it in less than a minute
- Marvelously helpful in highly affected regions of Sub-Saharan Africa, South Asia and more, it can even save the lives of more than 1 Million people

tinyML solution:

- Sony Sprensense main board + Camera shield + Edge Impulse tinyML model = Ultra-Low power Pneumonia detector with the help of scanning chest x-rays
- Detection of Pneumonia is mostly being done with the help of chest x-rays and doctor, whereas this small little device can do it in a few seconds with much higher accuracy than by a doctor
- The project is fully functional and has been clinically tested by more than 10 doctors in a local survey

Call to Action:

- Need a better UI/UX design so it becomes easier for users to navigate
- HELP NEEDED: The project is open for contributors. We're looking forward to accept contributions in any form you wish to! (<https://git.io/J1GUH>)