



PENTATHON HACTSTREET 2.0

PNEUMONIA DETECTION USING IMAGE ANALYSIS



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The result that we get after analysing the image

The background is a light blue gradient. On the left, a diver in a blue suit and mask is swimming. On the right, a nurse in a white coat and mask is holding a large magnifying glass. Scattered around are several blue virus-like icons and white plus signs. A dark blue horizontal bar contains the title 'INTRODUCTION' in white capital letters.

INTRODUCTION

Pneumonia is an inflammatory condition of the lung affecting primarily the small air sacs known as alveoli. Symptoms typically include some combination of productive or dry cough, chest pain, fever and difficulty breathing. The severity of the condition is variable. Pneumonia is usually caused by infection with viruses or bacteria and less commonly by other microorganisms, certain medications or conditions such as autoimmune diseases. Diagnosis is often based on symptoms and physical examination. Chest X-ray, blood tests, and culture of the sputum may help confirm the diagnosis. The disease may be classified by where it was acquired, such as community- or hospital-acquired or healthcare-associated pneumonia



ABOUT THE DATA

The dataset is organized into 3 folders (train, test, val) and contains subfolders for each image category (Pneumonia/Normal). There are 5,863 X-Ray images (JPEG) and 2 categories (Pneumonia/Normal).

Chest X-ray images (anterior-posterior) were selected from retrospective cohorts of pediatric patients of one to five years old from Guangzhou Women and Children's Medical Center, Guangzhou. All chest X-ray imaging was performed as part of patients' routine clinical care.

For the analysis of chest x-ray images, all chest radiographs were initially screened for quality control by removing all low quality or unreadable scans. The diagnoses for the images were then graded by two expert physicians before being cleared for training the AI system. In order to account for any grading errors, the evaluation set was also checked by a third expert.

CONFUSION MATRIX



RESULT

Mercury is the closest planet to the Sun and the smallest one in the Solar System—it's only a bit larger than the Moon. The planet's name has nothing to do with the liquid metal, since Mercury was named after a Roman god

