

Lung Image Analysis Project - Maintenance Guide

Software Updates:

- **Model Retraining:** If the dataset is updated or expanded with new images, retraining the YOLOv5 model is required for continued accurate predictions. Ensure to save backup versions of the current model before retraining.
- **Dependency Management:** Regularly check for updates to the project's dependencies in the requirements.txt file.

System Environment

Essential Dependencies:

- **Python Libraries:**
 - **OpenCV** for image processing
 - **PyQt5** for the GUI
 - **YOLOv5** for model training and detection
 - **Matplotlib** for image visualization and graph plotting
 - **NumPy** for numerical operations

Model and Dataset Setup:

- **Datasets:** Ensure that the lung X-ray dataset is available in the specified directories (train/NORMAL, train/PNEUMONIA, train/NON_LUNG). If needed, new images can be added to these folders.
- **YOLOv5 Model:** The pre-trained YOLOv5 model should be located in the model/ directory. If retraining is required, ensure that the dataset is organized correctly and retrain the model.

Installation:

Please follow the [how to install project.txt](#) file and user guide file that is located in Documents/User Guide.pdf to install our program, make sure to follow them step by step.

Contact us:

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