COVID-19 Classification Application 🐦

This is a Streamlit-based web application that uses a deep learning model to classify chest X-ray images into three categories:

- **Covid**: Indicating a positive Covid-19 case.
- **Normal**: Indicating a healthy individual.
- **Viral Pneumonia**: Indicating pneumonia caused by viruses other than Covid-19.

Features

- Upload chest X-ray images in `jpg`, `png`, or `jpeg` format.
- Predict the class of the uploaded image using a pre-trained deep learning model.
- User-friendly interface with tabs for navigation:
  - **Home**: Upload and classify images.
  - **About Model**: Learn about the model architecture, training details, and limitations.
  - **Contact**: Get in touch with the developers.

Installation

1. Clone the repository:

```
git clone https://github.com/your-repo/covid19-classification-app.git
```

2. Navigate to the project directory:

```
cd COVID_APP
```

3. Install the required dependencies:

```
pip install -r requirements.txt
```

Usage

1. Run the application:

```
streamlit run covid_app.py
```

2. Open the application in your browser at `http://localhost:8501`.

Model Details

- **Architecture**: Convolutional Neural Network (CNN)
- **Dataset**: Kaggle COVID-19 Image Dataset
- **Accuracy**: Achieved 95% accuracy on the validation set.

Limitations

- The model's performance depends on the quality and diversity of the training data.
- It may not generalize well to images from different sources or with varying image qualities.

Contact

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License

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