Project Execution Steps

1. Set Up Python Environment

```
cd your-project-folder
python -m venv venv

# Activate the virtual environment:
# On Windows:
venv\Scripts\activate
# On macOS/Linux:
source venv/bin/activate
```

2. Install Dependencies

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

If you don't have `requirements.txt`:

```
pip install flask numpy pandas opencv-python
tensorflow scikit-learn matplotlib seaborn joblib
weasyprint Pillow
```

3. Prepare Project Structure

```
project-root/
├── app.py
├── templates/
│   └── index.html
├── static/
│   ├── uploads/
│   └── output_heatmaps/
├── models/
│   ├── pneu_cnn_model.h5
│   ├── fusion_model2.h5
│   ├── pneumonia_model.pkl
│   ├── pneumonia_scaler.pkl
│   └── pneumonia_label_encoder.pkl
└── requirements.txt
```

4. Run the Flask Application

```
python app.py
```

Visit in your browser:

```
http://127.0.0.1:5000/
```

5. Use the Web Interface

- Input blood test values
- Optionally upload an X-ray image
- Select a prediction type: Blood Test, X-Ray, or Fusion
- Click **Predict** to see results and chart

6. Export PDF Report (if available)

If implemented, WeasyPrint will auto-generate a clinical report as PDF based on the results.