Malaria Detector Web Application - Technical Documentation

Project Overview

The Malaria Detector is a web application that uses deep learning (Convolutional Neural Networks) to classify blood smear images as either parasitized or uninfected. Built using Python, Flask, and TensorFlow/Keras, it provides real-time malaria detection.

Prerequisites

- Python 3.8 or later

- pip (Python package installer)

- Web browser (Chrome, Firefox, etc.)

Installation and Setup

1. Clone the repository:

   git clone https://github.com/Rudra-123-a/malaria-detector.git

2. Navigate into the project folder:

   cd malaria-detector

3. Install the required libraries:

   pip install -r requirements.txt

4. Run the Flask application:

   python app.py

5. Access the web app:

   Open your browser and visit: http://127.0.0.1:5000/

Project Structure

- app.py: Main Flask server application

- templates/: HTML files for frontend design

- static/: CSS and image assets

- model/: Trained CNN model for malaria detection

Troubleshooting

- Flask app not starting: Ensure Python is installed correctly. Run `python --version`.

- Error: Port already in use: Change the port in app.py or close the app using the port.

- Web page not loading: Confirm the Flask server is running without errors. Refresh the browser.

- Module not found: Run `pip install -r requirements.txt` again to install missing libraries.

Additional Notes

- The CNN model is pre-trained and loaded automatically when the Flask app starts.

- Recommended to run the application on a system with sufficient memory for faster predictions.

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