

Face Concern Detection System

This project is a deep learning based Face Concern Detection System that identifies different skin conditions from facial images using a trained ResNet18 model. The system is deployed using a Flask backend API and a React frontend interface.

Features:

- Upload facial skin image
- Predicts skin concern class
- Displays confidence percentage
- Works in real-time using API
- User-friendly web interface

Skin Concern Classes:

Normal, Acne, Wrinkles, Eczema, Rosacea, Dark Spots

Technologies Used:

Backend: Python, PyTorch, Flask, Flask-CORS,

PIL Frontend: ReactJS, HTML, CSS, JavaScript

Tools: Postman, Jupyter Notebook, GitHub

Project Structure:

FaceConcernProject/

Flask/

face-frontend/

README.md

Backend Setup:

```
cd Flask
```

```
pip install flask flask-cors torch torchvision pillow
```

```
python app.py
```

Frontend Setup:

```
cd face-frontend
```

```
npm install
```

```
npm start
```

Access Endpoint:

POST http://127.0.0.1:5000/predict

Sample Response:

```
{  
  predicted_class:  
    class1_acne, confidence: 99.44  
}
```

Working Flow:

User uploads image ☐ Flask API ☐ Model Prediction ☐ Result shown on frontend

Model Used:

ResNet18 (Transfer Learning)

Future Improvements:

Mobile app, Severity detection, Doctor recommendations