

ThermoML: User Guide

ThermoML is a thermal image-based system for detecting inflammation in hands using AI models and computer vision. It features a web interface, Firebase-based backend, and a Python-powered inference system with support for local and Hugging Face Space deployment.

Live Demo: <https://thermoml.web.app>

Contact: ThermoML@outlook.com

> **Note:** Backend image processing is currently offline. To request temporary access to the server, please contact us via email.

Getting Started:

Clone the repository:

```
git clone https://github.com/ShaharZeharia/TheremoML.git
cd TheremoML
```

Backend

requirements:

- Python 3.12.0
- Git
- ngrok(optical, for public url)

Download required models:

- **SAM - facebookresearch/segment-anything**
Checkpoint: vit_h
- **Google - Download Latest checkpoint**
- **Our built Resnet50 models - Google Drive Link**

Create .env for the Python App:

```
GOOGLE_APPLICATION_CREDENTIALS=path/to/your/credentials.json
MODELS_PATH=./models/
PORT=8000
DEBUG=True
CALLBACK_SECRET=your_secure_callback_secret
```

Run the Python Backend:

```
cd app
pip install -r requirements.txt
python main.py
(Optinal) Expose with ngrok:
ngrok http 8000
```

Firestore Cloud Functions(Local)

Create .env inside /functions

```
HUGGINGFACE_URL=https://your-ngrok-url.ngrok.app/api
HUGGINGFACE_TOKEN=your_huggingface_token (or leave blank if local)
CALLBACK_KEY=your_secure_callback_secret #Same as the one in the python .env file
```

Install and Run:

```
npm install -g firebase-tools  
firebase login  
firebase use --add  
cd functions  
npm install  
firebase emulators: start --only functions
```

Frontend

The frontend React app is located in the root folder.

Install Frontend Dependencies:

```
npm install
```

Run Frontend Locally:

```
npm run
```

This will launch the app at `http://localhost:3000`.

Hosting

Build the react app:

```
npm run build
```

Then deploy the *build/* folder.

Contact

If you encounter issues or want to contribute, feel free to reach out:

ThermoML@outlook.com