🌧 Weather Comparison App

> **Effortlessly compare weather stats between any two cities with stunning charts and lightning-fast performance.**
> Powered by **FastAPI**, **Chart.js**, and **AWS S3**.

🖼Weather Comparison App Banner

🚀 Features

🌍 Compare any 2 cities	📅 Flexible date range (up to 14 days)	📊 Interactive charts	☁ Save/load from S3	📤 Export as CSV
Max/Min Temperature	Wind Speed	Rainy Days	Browse history	

- **Compare** historical weather for any two cities
- **Flexible date range** (up to 14 days)
- **Interactive charts**: Max/Min Temperature, Wind Speed, Rainy Days
- **Save & load** data from **Amazon S3**
- **Browse saved history** (CSV keys from S3)
- **Export results** as CSV
- Built with **FastAPI**, **Jinja2**, **Pandas**, **Boto3**

🗂 Project Structure

```
weather-comparison/
│
├── main.py              # FastAPI app
├── routes/              # Route handlers
│   └── weather_routes.py
├── templates/           # Jinja2 HTML templates
│   ├── base.html
│   ├── weather.html
│   ├── about.html
│   └── contact.html
├── static/              # CSS & JS
│   └── style.css
├── weather/             # App logic
│   └── weather_fetcher.py
├── utils/               # Utility scripts
│   └── s3_utils.py
├── .env                 # Secrets (ignored in Git)
├── .gitignore           # Ignore list
```

```
├── requirements.txt       # Python dependencies
└── README.md              # Project documentation
```

⚒ Quickstart

1. Clone & install dependencies

```
git clone https://github.com/Kamal2131/weather-comparison.git
cd weather-comparison
python3 -m venv venv
source venv/bin/activate
pip install -r requirements.txt
```

2. Configure environment

```
# .env
AWS_ACCESS_KEY_ID=your-access-key
AWS_SECRET_ACCESS_KEY=your-secret-key
AWS_DEFAULT_REGION=your-region
S3_BUCKET_NAME=your-bucket-name
WEATHER_API_KEY=your-weatherapi-key
```

3. Run the app

```
uvicorn main:app --host 0.0.0.0 --port 8000
```

Visit: http://localhost:8000

🌐 Tech Stack

Backend	Frontend	Cloud	Data	Weather API
FastAPI	Jinja2, Chart.js	AWS S3	Pandas	weatherapi.com

🗄 S3 Folder Structure

```
kkgbucket4121/
└── weather/
    ├── kolkata_2025-07-24_2025-07-22.csv
    ├── delhi_2025-07-24_2025-07-22.csv
    └── ...
```

✦ Screenshots

> *Add screenshots or screen recordings here to showcase the UI and charts!*

👤 Author

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🏵 Contributing

1. Fork the repo
2. Create a branch (`feature/YourFeature`)
3. Commit your changes
4. Open a PR

🗐 Resources

- [FastAPI Docs](#)
- [Chart.js Docs](#)
- [Boto3 Docs](#)
- [Pandas Docs](#)
- [WeatherAPI](#)