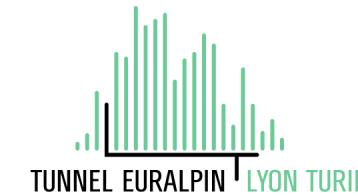




# Data Philosopher

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# Climate Challenges in the Alpine Valleys

The **Alpine region is experiencing rapid climate change** with severe consequences:

- **Glacial melting** → Reduced water resources, increased landslide risks.
- **Extreme weather events** → More frequent heatwaves, storms, and unpredictable snowfall.
- **Biodiversity loss** → Threats to endemic species and ecosystem disruptions.

**The need for accurate climate forecasts:**

- Supports sustainable policies and decision-making.
- Helps local communities and institutions prepare for future climate scenarios.

# Reliable Data for Accurate Predictions

**High-quality climate datasets** were used to ensure accuracy:

- **Copernicus** → Satellite data for large-scale climate observations.
- **NOAA** → Global climate trends and historical datasets
- **ARPA Piemonte** → Local environmental monitoring, essential for regional accuracy.

**Why these sources?**

- They provide a **comprehensive view**, from global trends to local impacts.
- Data quality and frequency allow for **robust predictive models**.

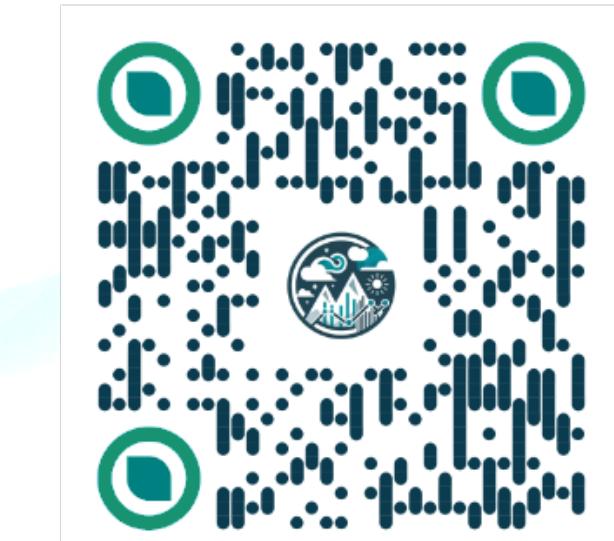


Data Processing

ML predictive model

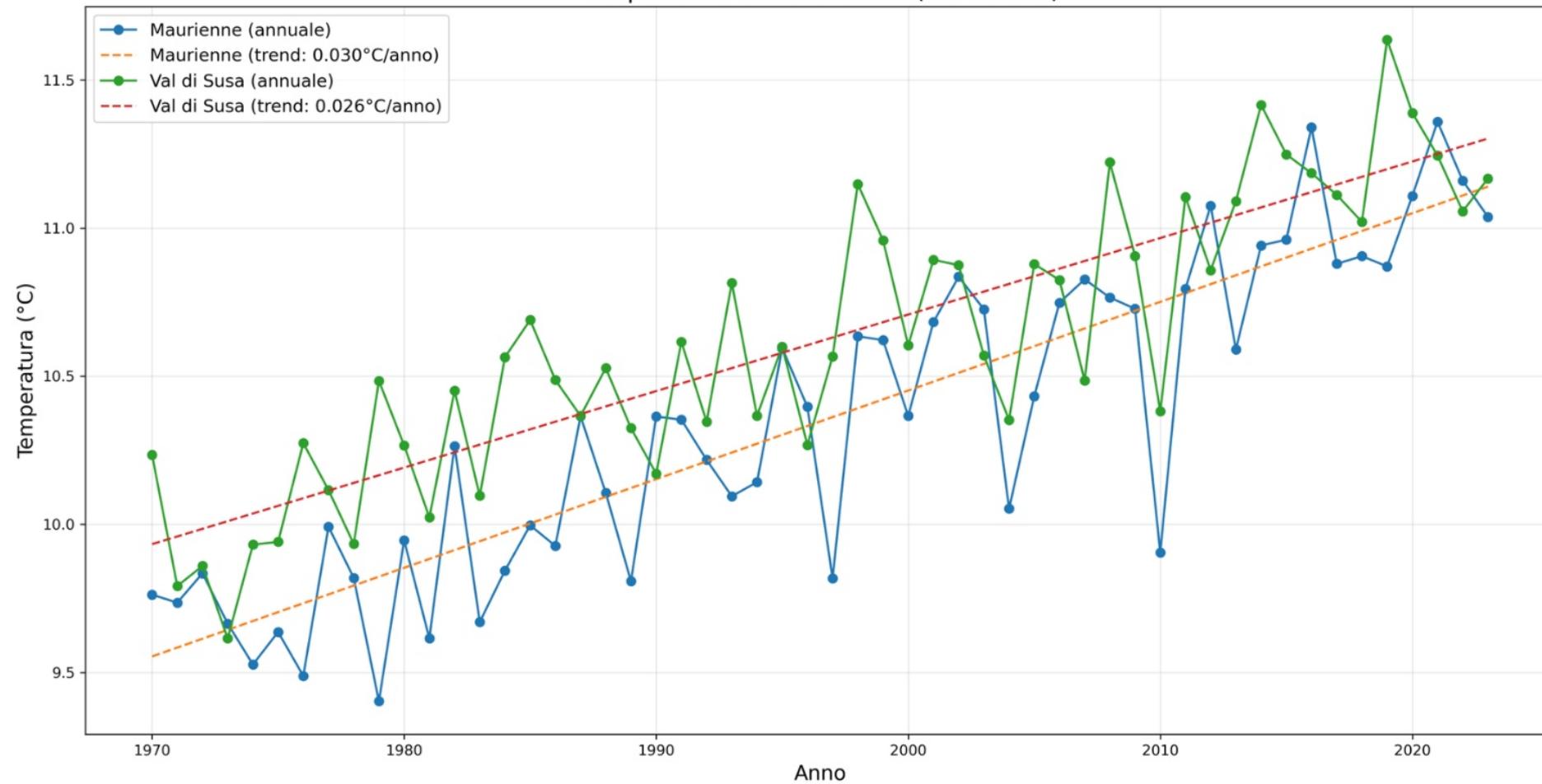
App Prototype

Scan  
me!

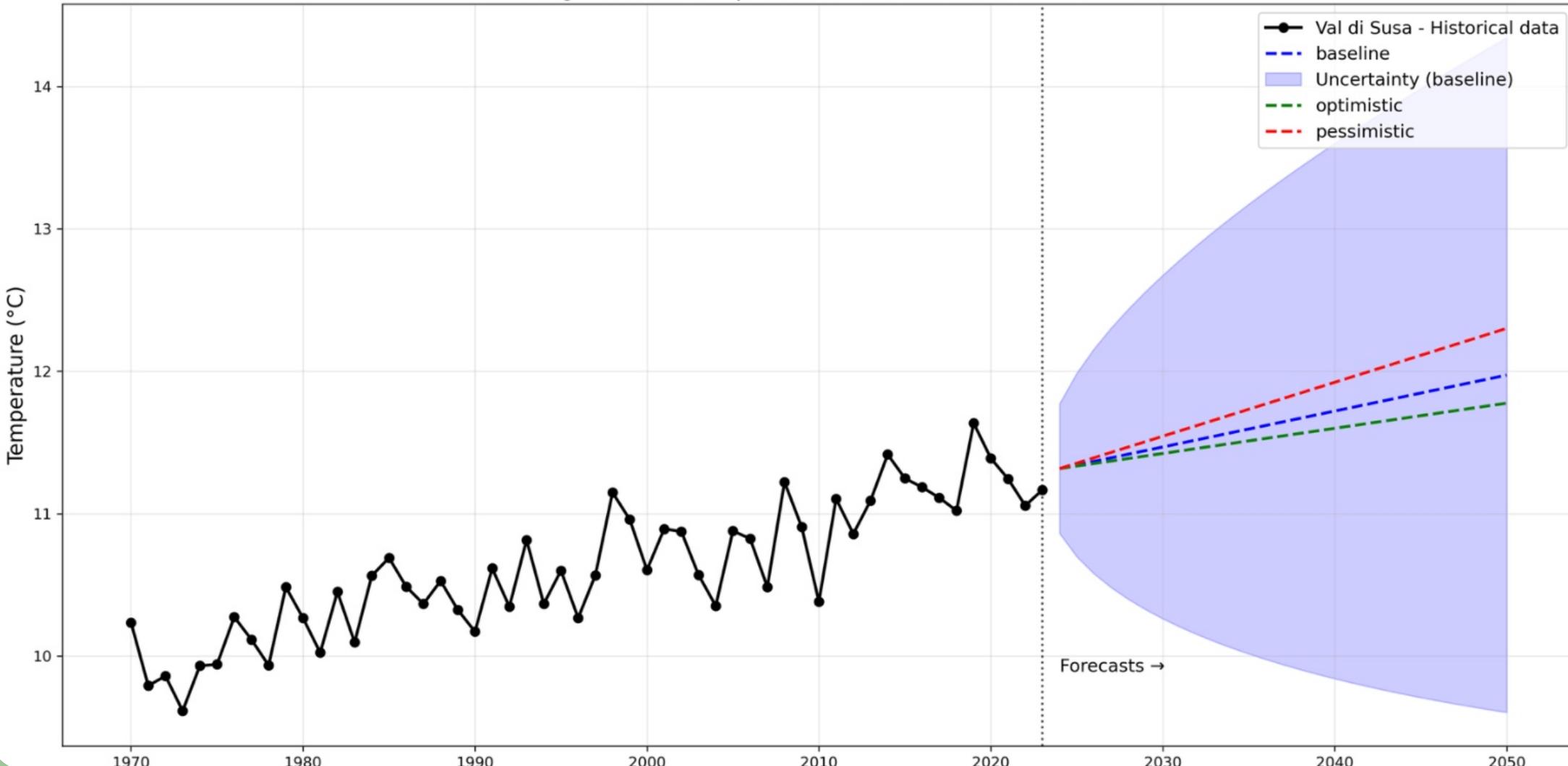


## Historical data and trends

Temperatura media annuale (1970-2023)



## Average Annual Temperature - Val di Susa (1970-2050)



TUNNEL EURALPIN LYON TURIN

## Average annual temperature forecast by region:

### Maurienne:

Reference temperature (1970–2000): 10.00°C

Predicted temperature (2041–2050): 11.82°C

Expected variation: +1.82°C

### Val di Susa:

Reference temperature (1970–2000): 10.34°C

Predicted temperature (2041–2050): 11.86°C

Expected variation: +1.52°C

### Variation scenarios 2041–2050 vs 1970–2000:

### Maurienne:

Scenario baseline: +1.82°C

Scenario optimistic: +1.63°C

Scenario pessimistic: +2.15°C

### Val di Susa:

Scenario baseline: +1.52°C

Scenario optimistic: +1.36°C

Scenario pessimistic: +1.79°C

# Why an App? Democratizing Climate Data

**Climate data is complex and not easily accessible to the general public.**

**We created an app to:**

- Simplify access to **real-time climate data** for citizens, students, and policymakers.
- Improve engagement through **interactive visualizations and educational tools**.
- Increase **climate awareness and preparedness**.



**Check it out!**

# Empowering Communities with Climate Intelligence

## Who benefits from the app?

- **Citizens** → Stay informed, receive alerts, and contribute local observations.
- **Schools & Universities** → Use it as an educational tool to teach climate science.
- **Institutions & Policymakers** → Data-driven decisions for environmental policies.

## Long-term impact:

- Increases public engagement with climate data.
- Helps mitigate risks through **early warnings and insights**.
- Bridges the gap between **science and everyday life**.



## TAKEAWAY

- Analysis
- Awareness
- Action



Dashboard

## UPGRADE

- Adapt
- Implement
- Improve



## SCALE

- Deploy
- Democratize
- Distribute

Application

