

MVP Showcase

GeoAI-LYME Early Care Navigator: **Lyme AI-ert**

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Lyme AI-ert: Visual Spatiotemporal Lyme Alerts

Weekly county-level Lyme alerts powered by **multifaceted AI** and **open data**.

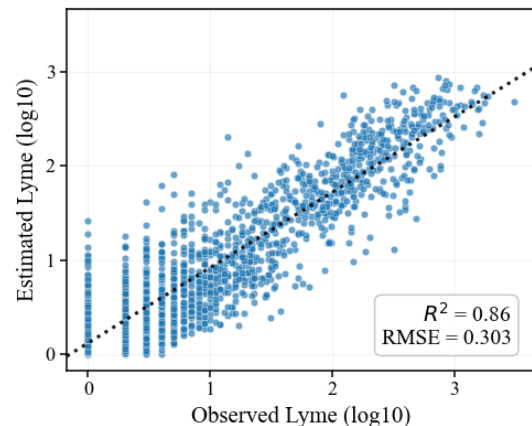
- ❖ **User:** People with possible tick exposure, rash concern, or Lyme-like symptoms asking “**Should I be concerned, what should I do next?**”
- ❖ **Open Data:** **CDC** Lyme surveillance, **Earth observation** (NASA, USGS, USDA, NOAA) — environmental data related to **tick habitat** and **human exposure**, online **search trend signals**.
- ❖ **Approach:** **Spatial** Info. by **GeoAI** & **Temporal** Info. by **TrendAI**
- ❖ **Resources:** **VisionAI** rash screening and Lyme information.

→ **Goal:** Turn **open data** into **actionable Lyme alerts**
& support **early awareness** and **informed care-seeking**.

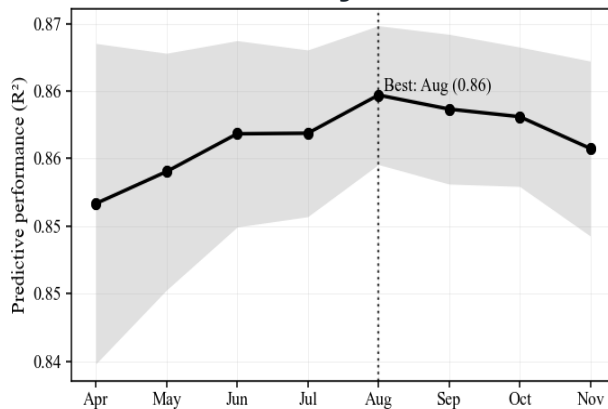


GeoAI: Predicting Annual Lyme Cases and Spatial Patterns

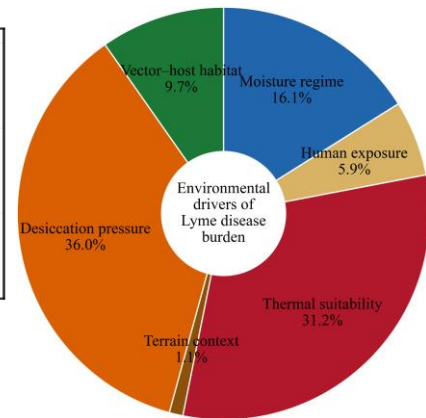
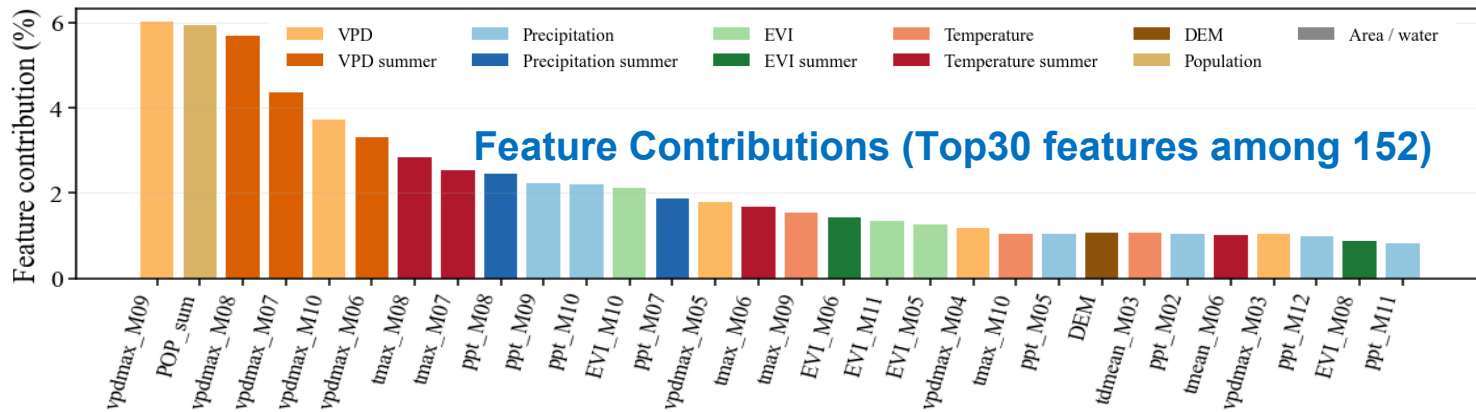
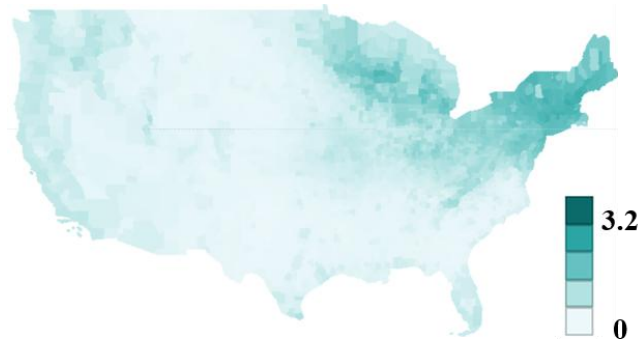
Model performance



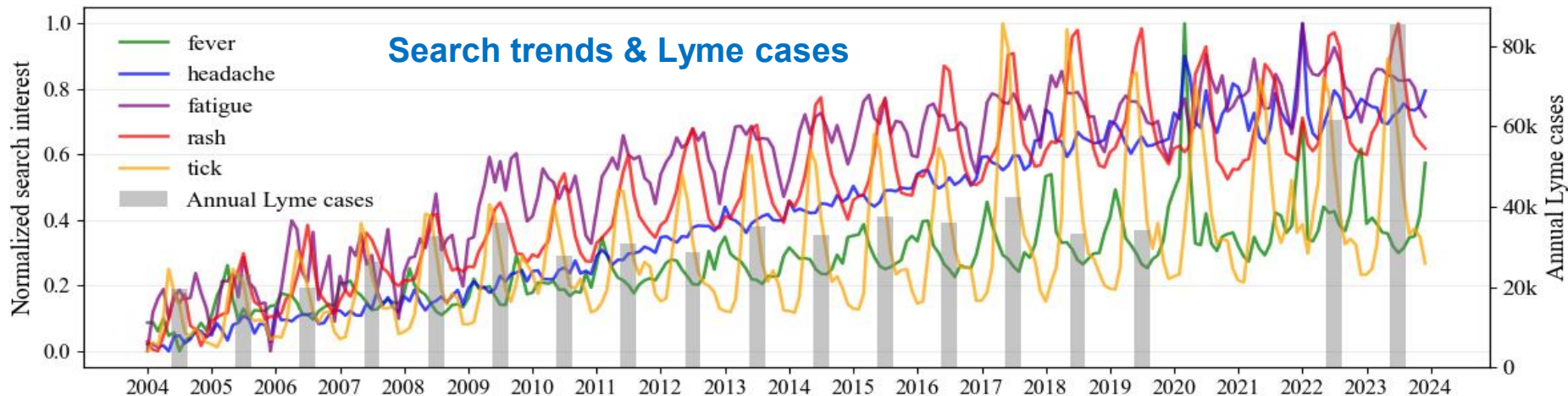
In-Year Prediction Performance by Cutoff Month



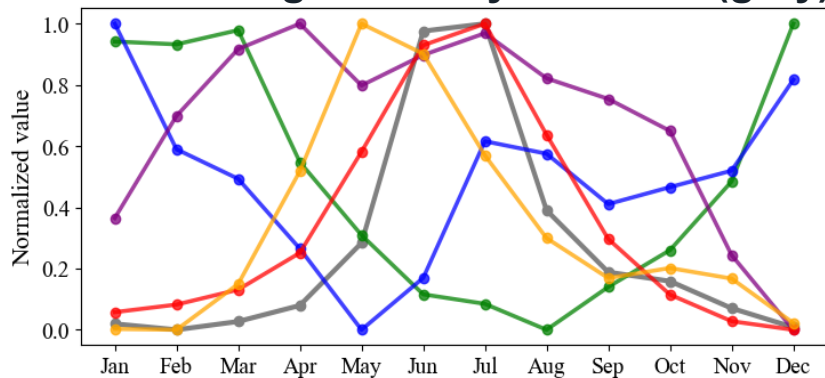
Predicted Annual Lyme cases (log₁₀), 2026



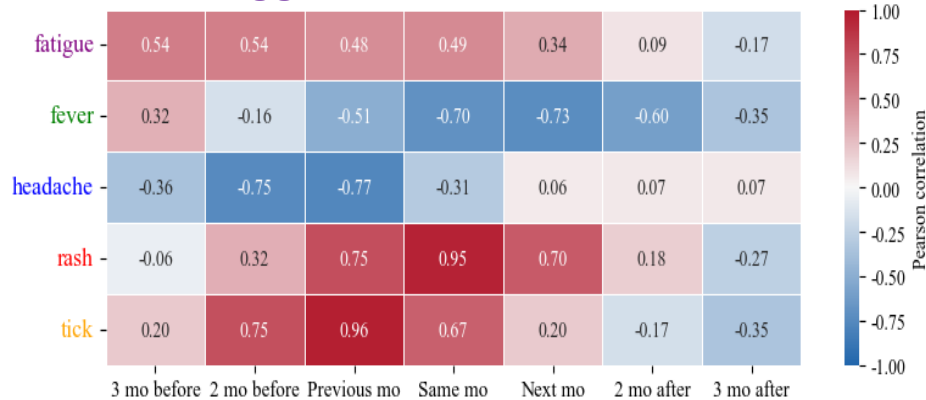
TrendAI: Captures Recent temporal signals from search behavior



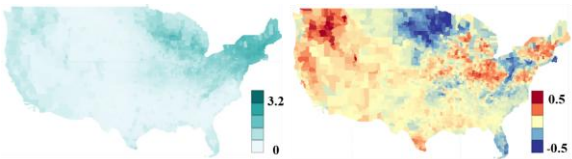
Seasonal alignment: Lyme cases (grey)



Lagged Pearson correlations



Weekly Alert Fusion (county-level)



Annual GeoAI (County)

Burden + annual change

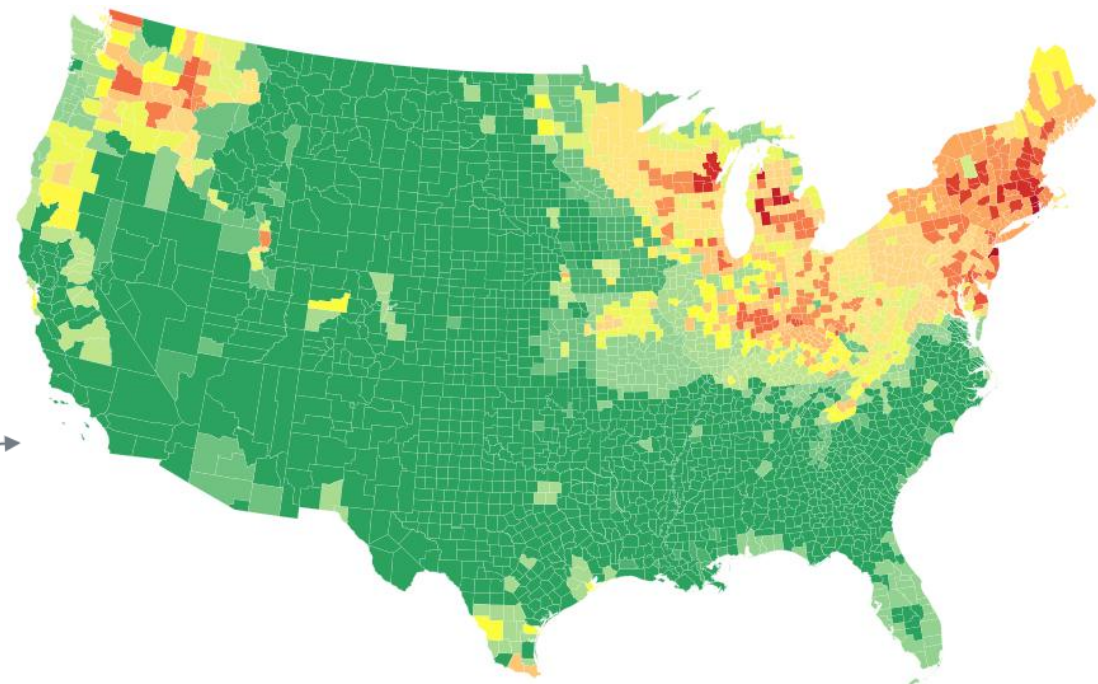
Monthly TrendAI (Regional)

Seasonal anomaly

Weekly TrendAI(Regional)

Recent search change

Fusion



0 Normal 1 Low 2 Watch 3 Moderate 4 High 5 Very high

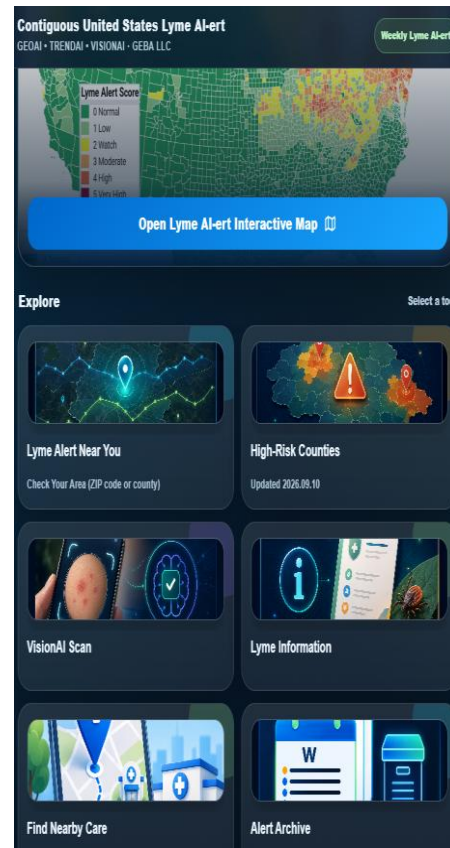
* Alert level represents county-level alert priority, not individual infection probability.

Operational Web/App Demo — Everything at Your Fingertips

<https://gebaconsulting.com/lyme>



- ✓ Explore **Interactive map** (**GeoAI&TrendAI**) for latest Lyme alert
- ✓ Enter ZIP code or county in **Lyme Alert Near You**
- ✓ View **High-risk counties** with elevated alert levels
- ✓ Access **VisionAI** Scan, an symptom checklist, and **Lyme Information**
- ✓ Review the **Alert Archive** to see changes over time



Lyme AI-ert: Web and APP MVP is Live and Operational

Turning Open Data into Actionable Lyme Alerts with AI

- ❖ Available on Google Play & Apple Store —developed by student interns
- ❖ Continue **weekly county-level Lyme alerts** (2027-2029, March-Nov.)
- ❖ **Scalable AI framework** for other **tick-borne diseases** and **broader regions**
- ❖ Seeking research and outreach **partnerships** with public-health and Lyme community organizations & improving the service through **user feedback**



Lyme AI-ert for Google Play by 2026 GEBA LLC

Thanks!



Lyme AI-ert for Apple by 2026 GEBA LLC

