TelusGuard AI

Real-time AI-powered predictive threat intelligence for Telus's telecommunications infrastructure

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When a cell tower goes down during a wildfire, hurricane, flood, or earthquake, it’s not just about lost service, it’s about the lost lives.

Problem Statement

“Cellular Network Towers Fail When They’re Needed Most”

Massive Impact

- Mobile network outages disrupt daily life which cause ***billions in economic losses.*** Thus, creating ***real safety risks*** during emergencies

No Predictive Intelligence

- Operators react *after* towers go down. There isn't a real-time system to ***identify high-risk zones.*** No forecasting of **which towers will fail next**

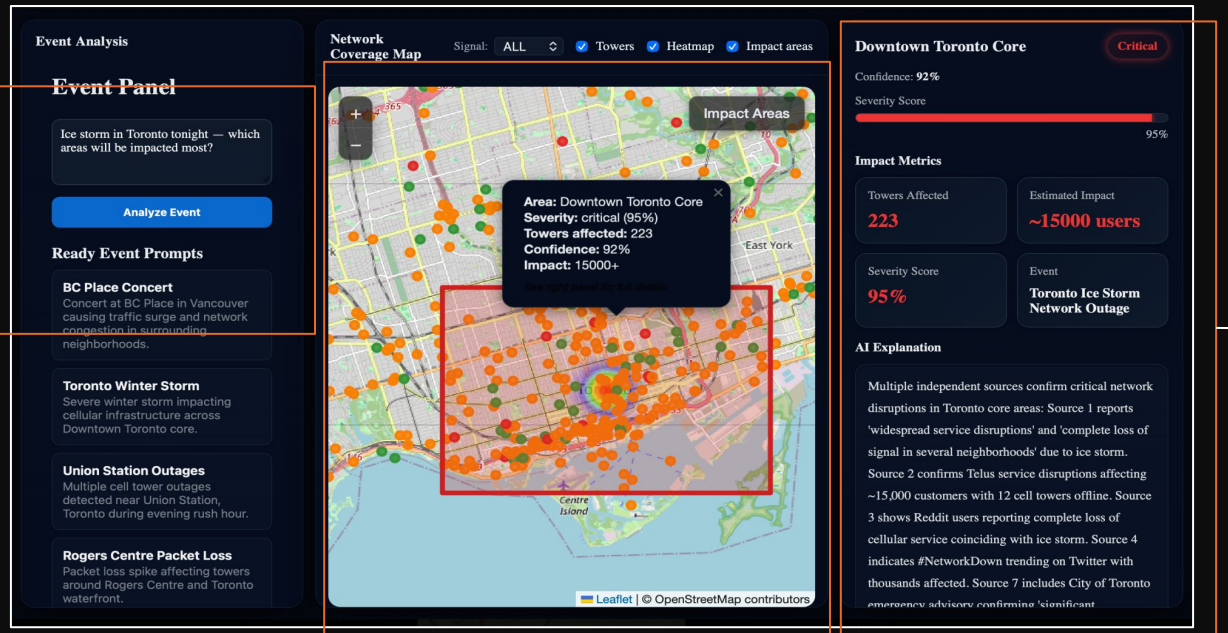
Zero Proactive Visibility

- Businesses can’t plan around outages. Emergency services lack network awareness Users are blind to critical connectivity gaps

Our Solution

Multi-Agentic AI platform that analyzes network disruptions during natural and infrastructure events, turning questions into geospatial, tower-level impact insights.

Natural-language interface for querying current and future network-impacting events.

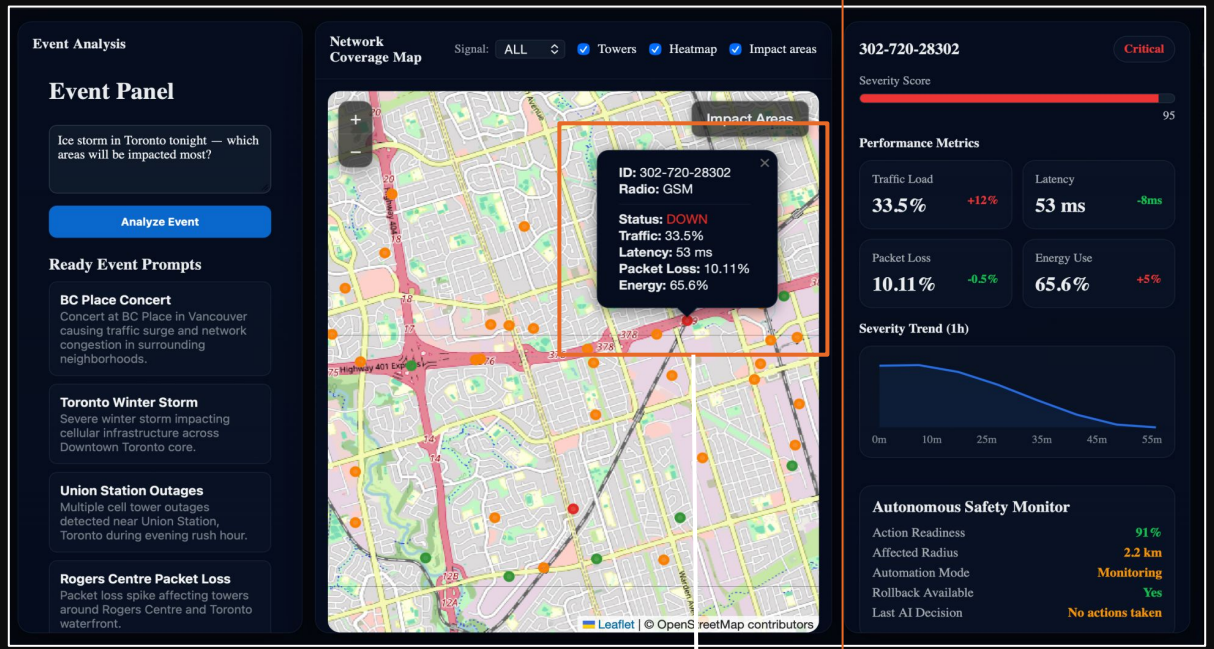


Automated impact assessment that combines severity scoring with multi-source AI reasoning to transform high-level questions into confident, tower-level network intelligence.

Interactive map visualizing real-time status of 19,000 + Telus towers, with heatmaps and impact zones.

Our Solution

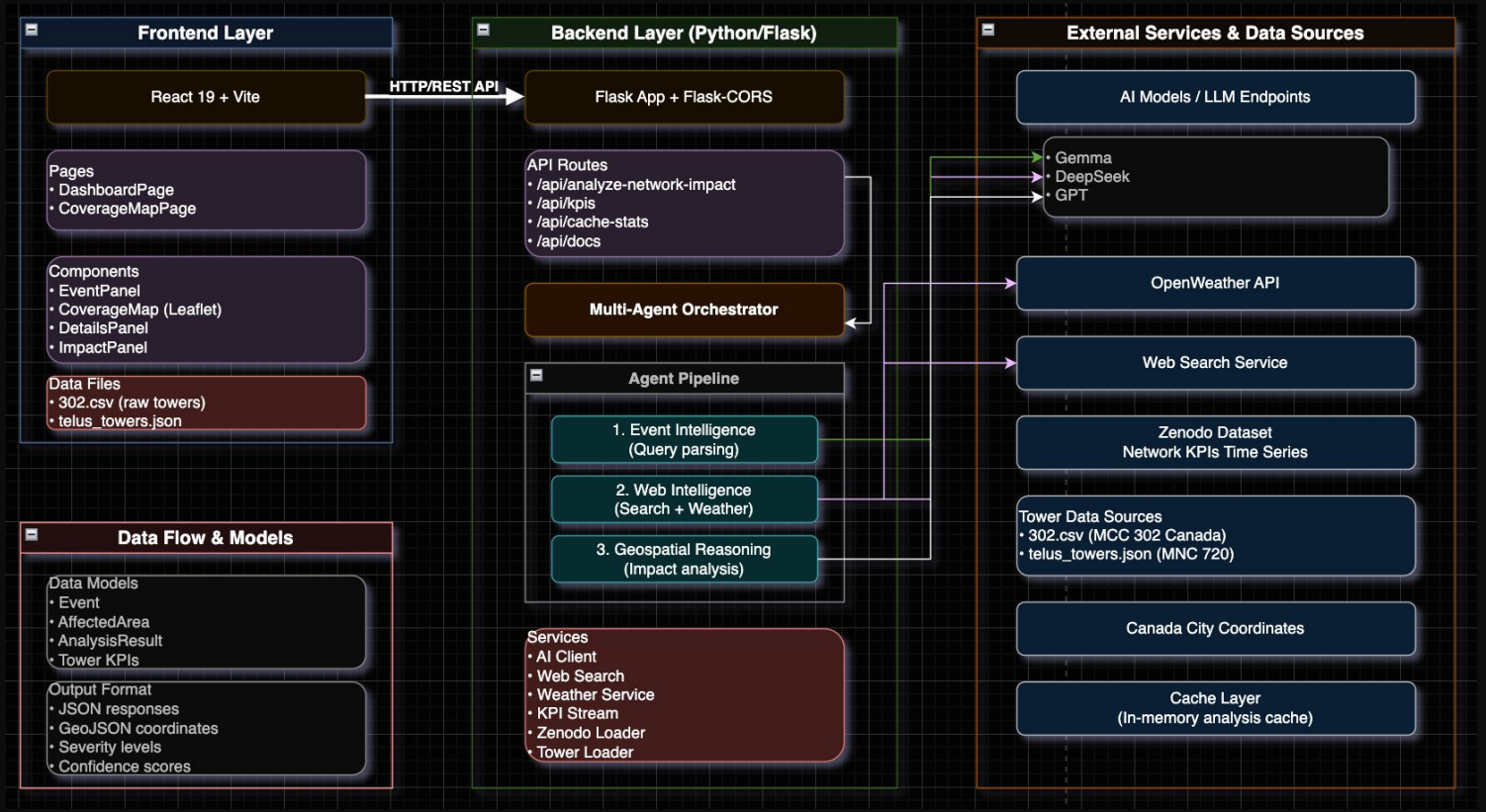
Operational Visibility at Tower Level. Pinpoints affected towers and surfaces critical KPIs in real time.



Real-time visibility into the health, performance, and outage status of individual towers within impacted regions.

Continuously evaluates severity trends and operational risk, enabling proactive monitoring, readiness scoring, and rollback decisions

Technical Architecture



Real World Impact

Natural Disaster Response

Instantly map network impacts during ice storms, floods, wildfires. Auto-identify affected towers and prioritize repair crews in real-time.

Mass Event Planning

Anticipate network strain during concerts, sports, protests. Deploy mobile cells preventively to avoid congestion.

Executive Intelligence

Natural language queries: "How did the Toronto blackout affect our customers?" Instant C-suite reporting with confidence scores.

Climate Resilience

Long-term modeling of climate change impacts on network reliability. Strategic infrastructure hardening decisions.

Future Roadmap

Automated Simulations

Automated alert system for high-probability disruption events

ML Incorporation

Machine learning models for 24-48 hour impact forecasting

Multi-Carrier Management

Expand beyond TELUS to Rogers, Bell, Shaw networks

More Sensor Data

Add more live scanners for temperature, humidity, etc) for better context.

Stronger API Incorporation

Integration with Environment Canada's weather prediction APIs

Stronger Agentic Workflow

Work and test different models to see if they generate better consensus.

Stronger Contextual Information

Scape live feeds from X and Reddit in order to gain richer data for the LLM.

The end

CAREER READY PROGRAM

TELUS

Thank you