Insight
Transportation Consulting

CAPABILITY STATEMENT:
ARTIFICIAL INTELLIGENCE APPLICATIONS

CORE COMPETENCIES

Insight Transportation Consulting Inc. uses Artificial Intelligence (AI) to help clients accelerate workflows and put critical information on-hand and at the speed of decision-making. Our AI and machine learning tools automate calibration, validation, and reporting, empowering clients to move from analysis to action faster than ever before. We harness Large Language Models (LLMs), machine learning, intelligent agents, and other AI tools to:

- Turn complex transportation data into actionable insights.
- Complete rigorous technical tasks in hours instead of weeks.
- Open technical "black boxes" to executives and decision-makers.

At Insight, we are transportation planners and engineers first: we are experts who understand how data, policy, and human behavior interact to shape mobility systems. Our AI and machine learning tools are born from those experiences and are designed to solve real transportation modeling and planning challenges, not theoretical ones. We build AI because we know what makes modeling processes work, what slows them down, and what decision-makers need from them. We don't build generic AI and then try to apply it to travel demand modeling; we build AI because we know what makes modeling processes work, what slows them down, and what decision-makers need from them. That distinction defines Insight's approach...AI built by transportation experts, for transportation experts.

PAST PERFORMANCE & CURRENT ACTIVITIES

Ask Me About CFRPM 7 Data (Insight-created AI reference tools)

Insight developed two innovative AI tools that **make complex demand modeling information accessible through natural language.** These public-facing systems allow users to instantly query and summarize more than 800 pages and nearly 100,000 traffic data records of the Central Florida Regional Planning Model's (CFRPM) technical documentation without specialized software or training. End-users can ask practical questions such as: "*How were the key model inputs validated?*", and "*Which roadways are the ten fastest growing in the county*?" or ask about the format of any of the thousands of input and output files. The AI tools can also generate bar charts, tables, and other graphics that can be downloaded directly into presentations and reports. By combining natural-language search, retrieval, and visualization, these tools **bridge the gap between complex technical models, and the clear, on-demand information non-modelers need to make informed decisions.**

Evaluation of Traffic Forecast Accuracy and Robustness

For the Metropolitan Council (the Minneapolis–St. Paul region's Metropolitan Planning Organization), Insight used **AI to extract relevant traffic forecasting data from more than 450 reports dating back to the 1980s**, reducing the time required from weeks to a single day. By automating the data-gathering process, staff could focus on error checking and gap filling rather than manual search and review. These methods **accelerated the analysis by months** and provided a reproducible framework for future updates.

Transit Network Manipulation (Insight-created AI data tool)

Insight developed an **AI-powered tool that enables users to query and manipulate transit network data in GTFS format,** the standard used across the US to describe transit service. While GTFS data is ubiquitous, it can be cumbersome to extract simple facts or perform edits manually. Insight's tool streamlines this process, allowing users to perform **natural-language queries and straightforward edits** such as updating service headways, modifying stop attributes, or summarizing route coverage. New functionality is added quarterly, continually expanding the tool's analytical and editing capabilities. The tool empowers technical and management staff to explore, modify, and understand transit service information directly; **this breaks down the "black box" between data specialists and decision-makers.**

AI Enhanced Travel Demand Model Calibration and Validation Run Routine

For the Florida Department of Transportation (FDOT), **Insight is piloting AI-driven applications to automate the calibration and validation of regional travel demand models.** Today, model calibration and validation are manual, time-consuming, and highly dependent on individual staff expertise, making the process difficult to sustain over time. Insight's **AI-assisted calibration and validation framework** is designed to cut this effort from **several months to just days or weeks,** dramatically reducing the time and resources required for each model update. If successful, this approach will enable more frequent model updates rather than the traditional five-year cycle, keeping models current, improving analytical reliability, and providing FDOT and its partners with a continuously modernized foundation for transportation analysis and decision-making.

Email Access to Internal Data or Model Runs (Insight-created AI application)

Insight has developed **AI tools that enable managers and technical staff to access internal data and modeling resources directly through email.** These tools allow users to send questions or requests to AI agents via email and receive intelligent, context-aware replies that include written responses and any relevant attachments. Additional functionality enables technical staff to email model files to a secure sandbox, where the agent automatically runs the model and returns specific outputs or AI-generated post-run summaries. By combining these AI capabilities with the familiar email interface, Insight provides users with a **secure and auditable path** to internal data and models while preserving **archiving and search features** that make results easy to retrieve during meetings or reviews.

DIFFERENTIATORS

- Insight's custom AI tools are built by transportation experts, for transportation experts.
- Insight is reducing data processing time and resource needs today by applying powerful AI-driven tools to real-world modeling challenges.
- At the forefront of applied AI, Insight continually integrates the latest machine learning and LLM technologies by adding new capabilities each quarter.
- With deep experience across dozens of datasets, software platforms, and modeling environments, Insight builds customized workflow solutions tailored to each client's needs.
- Insight is developing public-facing tools that enable rapid data retrieval and natural-language editing of complex transportation networks.

CONTACT INFORMATION

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