INNOVATION PARTNERSHIPS
UNIVERSITY OF MICHIGAN

Visual Interactive Model Explorer (VIME): An Interactive "Photoshop for AI" Platform

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OVERVIEW

Visual Interactive Model Explorer (VIME) is an interactive “Photoshop for AI” platform that enables users to visually probe, understand, and fix gaps in AI model knowledge in real time; by addressing the common limitations of AI models missing key domain knowledge—either from incomplete data or algorithmic limitations—VIME helps ensure AI systems achieve expert-level, trustworthy decisions across a range of applications.

View online

DESCRIPTION

VIME provides a plug-and-play environment where users can upload their AI models and interactively explore their decisions using visual tools, without writing code. Users investigate “what-if” scenarios to spot missing expert knowledge (latent knowledge) that models failed to learn, whether due to data issues or algorithm limitations, and can then adjust model behavior through intuitive steering tools that guide models toward desired, expert-aligned outcomes. Built through a human-centered design process, VIME works with any data or model type, supports both technical model engineers and non-technical domain experts, and gives stakeholders the means to quickly diagnose and correct high-impact mistakes that traditional, opaque AI tools cannot address.

VALUE PROPOSITION

- Reveals and remedies latent knowledge gaps in AI models that traditional tools overlook, improving decision quality and trustworthiness.
- Allows both AI engineers and subject-matter experts to interact with and correct models in a code-free, intuitive interface.
- Universal compatibility with different models, data types, and domains, supporting a wide breadth of applications.

TECHNOLOGY READINESS LEVEL

INTELLECTUAL PROPERTY STATUS

Proprietary software; Provisional Patent Application pending.

MARKET OPPORTUNITY

VIME meets a critical need for reliable, explainable, and expert-aligned AI in high-stakes areas such as healthcare, finance, criminal justice, disaster management, and government, where AI mistakes can have serious consequences. Early users include enterprise AI teams and academic researchers, but the platform also targets non-technical users and regulators who need to verify and steer AI decisions. With the growing demand for responsible and compliant AI, especially in regulated industries and public policy, VIME is well-positioned as organizations increasingly invest in transparency and risk mitigation tools; recent market forecasts predict fast growth in the responsible AI sector, driven by these needs.

- This project has participated in Customer Discovery