Provisional Patent Application

Title: Adaptive Trust-Based Feedback System for AI Field Diagnostics

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# Background

Field diagnostics powered by artificial intelligence (AI) increasingly assist professionals in service industries such as plumbing, HVAC, and electrical work. However, most AI systems operate in a fixed logic mode, producing outputs without considering human trust feedback. This creates friction when users disagree with results, feel misrepresented, or lose confidence in the AI. There is currently no known system that adapts its output generation based on accumulated trust behavior from multiple human roles.

# Summary of the Invention

This invention introduces a system that allows AI-generated diagnostic outputs to evolve based on user trust feedback. The system collects trust indicators (e.g., thumbs up/down, role-specific overrides, comment ratings) from distinct user roles—such as homeowners, field technicians, inspectors, or managers—and uses those inputs to adjust future scoring language, phrasing style, and confidence weighting. By embedding a continuous trust feedback loop into the AI’s output logic, the invention creates a more human-aligned and trustworthy diagnostic system. This enables the AI to refine how it communicates, how assertive it is, and which tone or message framing it selects based on prior trust success.

# Key Features

* - A trust feedback ingestion layer that tags input by user role (e.g., plumber, homeowner, inspector).
* - An adaptive messaging system that modifies tone, phrasing, and certainty based on historical feedback.
* - A reinforcement loop where human interactions with previous outputs dynamically influence how future outputs are constructed.
* - A system for aggregating trust behavior across job types, geographic regions, or company teams to fine-tune AI scoring delivery at scale.
* - Role-weighted feedback logic that prioritizes technical users differently than non-technical users.
* - Trust signal tracking at the output level (e.g., this score explanation received 92% homeowner approval).
* - The ability for end users to view trust-adaptive report versions tailored to their preference or permissions.
* - Integration with scoring engines (e.g., NeuraScore) to make the trust adaptation fully modular.
* - Optional override logic where managers can flag overrides as retraining cues.
* - All feedback collected in real-time, with periodic trust recalibration for evolving conditions.

# Example Use Case

A plumber uploads a job photo. The AI returns a NeuraScore of 4. The plumber disagrees with the phrasing: "Installation may need improvement." They downvote that phrasing. A manager flags the language as misleading. In the future, when similar jobs are submitted, the AI learns to say: "This install is safe and functional, but may not meet elite standards." Over time, homeowner responses indicate higher trust, and the adjusted phrasing becomes the system default.

# Advantages

* - Protects against misalignment between AI and human interpretation.
* - Builds user trust over time through adaptive messaging.
* - Prevents repeated friction from fixed-output systems.
* - Enables systems to improve based on real human feedback across roles.