Bridging Medical Deserts: AI-Powered Healthcare Intelligence System

Databricks Sponsored Track | Virtue Foundation Challenge

Team Members: Arturo Favara, Emma Sampietro
Emails: favara@mit.edu, esampi@stanford.edu

We built a healthcare intelligence product designed to help NGOs act faster where care is most scarce. Instead of leaving planners to navigate fragmented hospital data manually, our system identifies where medical capacity is weak, where risk is highest, and where intervention can save the most lives. In practice, this means moving from slow, uncertain planning cycles to rapid, evidence-backed decisions on staffing, funding, and priority support.

The core innovation is not just analysis, but actionable coordination. Our platform translates messy facility information into a clear picture of real access to care, then combines that with regional risk signals to highlight medical deserts and underserved populations. It gives decision-makers both a strategic view (which regions need urgent attention) and an operational view (which facilities show critical gaps), so resources can be deployed with precision.

For users, the experience is intentionally simple: an interactive map and natural-language interface that lets non-technical planners ask questions like "Which regions have lower maternal-care coverage?" and get immediately interpretable answers. This bridges the gap between complex health data and real-world action.

Our vision is to become an intelligence layer for healthcare equity: helping organizations continuously detect gaps, prioritize interventions, and deliver treatment sooner for communities that are currently hardest to reach.