EDUCATION

BUILDING A SECURE, INSIGHT-DRIVEN DATA PLATFORM FOR A PREMIER INSTITUTION

Status: Ongoing

A top-tier institute in Delhi required a secure, self-hosted data intelligence platform to analyze large datasets from multiple sources. The solution needed to support interactive dashboards, GIS-based visualizations, and high-level analytics while maintaining full data privacy and local hosting.

Challenges

- **Multiple Data Sources**: Research and operational data were spread across departments and not centralized for decision-making.
- **Lack of Interactive Visualizations**: Existing tools didn't support customizable dashboards with real-time filtering or GIS overlays.
- **Security & Hosting Restrictions:** Cloud solutions were not preferred; the platform needed to be hosted securely within the institution.
- **Limited Technical Accessibility**: Users needed a simplified interface to interpret data without relying heavily on developers or analysts.

Results Delivered

- Centralized visibility into research and infrastructure data, improving cross-department coordination.
- Faster decision-making through live dashboards and easy-to-understand visuals.
- Secure on-premise hosting aligned with institutional IT policies and data confidentiality needs.
- Increased user adoption due to simplified UX and customizable data views.
- Scalable architecture for future expansion across departments, labs, and initiatives.

Solutions

- Developed a secure, locally hosted platform capable of processing large datasets and generating real-time analytics.
- Integrated GIS functionality using GeoServer and PostGIS to visualize geospatial data
- Created custom dashboards for role-based access, performance tracking, and project analysis.
- Enabled modular integration so departments could plug in their datasets & build department-specific views.
- Ensured internal hosting and data governance protocols.