

EMPOWERING RESEARCHERS TO EXCEL

We helped a large public research university in California build AI/ML-driven solutions for managing technical data.



Customer's challenge

The customer, a California-based public research university, created a Safety Platform, empowering its customers with the tools to address safety and compliance in laboratories, hospitals, and other workspaces. Originally an internal tool, it is now marketed as a modular product. The customer needed a solution to free the scientists' time from managing the content library for productive research.

The pressure points

- Technical data on the chemicals were scattered across multiple vendors' websites and updated periodically.
- 3-4 research assistants were occupied full-time to keep the content library updated.
- Keeping the library updated was critical for handling chemicals according to the technical specifications.

Our solution

We updated the customer's database with precise chemical hazard information using AI technologies. The team structured the data and populated the chemical database automatically. We developed a web application for analytics, reports, and dashboards, collaborating with Environment, Health, and Safety (EH&S) and research communities to provide innovative, simplified solutions.

Our support included web application development, testing, automation of manual processes, application management, and ensuring robust security. We delivered end-to-end services for web applications.

- AI/ML-powered TDS content library enabled users to search and extract information from any chemical product's TDS (Smart TDS Search) using web crawling, OCR, NLP, and deep learning models.
- Users can search for TDS by query or by scanning the label of a chemical product (image/webcam scan).
- The solution ensured safe storage and real-time adherence to Standard Operating Procedures (SOPs) for handlers with accurate instructions.

Results that speak volumes

- Created accurate and latest technical specifications for over 3,000 potentially dangerous experimental chemicals used in highly research-oriented products.
- Freed up time for 3-4 research assistants from gathering critical specifications manually.
- Enabled real-time recognition of the chemical and handling information access.
- Ensured database assured lab safety, occupational health, and risk management capabilities.
- Reduced the related incidents by 20%.
- Reduced manual intervention for structuring data.