

AI-Powered CRE Investment Platform

Client

The client is a technology-driven platform specializing in investment management for private commercial real estate (CRE). Their mission is to simplify and optimize investment processes through advanced technologies, including AI, to enhance both decision-making and operational efficiency.

Technologies Used

- React
- Python
- NestJS
- AWS



Description

The client required a flexible and scalable system powered by AI and cloud technologies. The solution needed to enable automated data ingestion and transformation, support advanced risk assessment models, ensure stability and performance for thousands of concurrent users.

Team Size



13 team members

Duration



6 months-ongoing

Location



USA

Industry



Financial Services

Project Overview

1

Challenge

Investment management in private CRE involves complex data processing, risk assessment, and reporting workflows. The client needed a solution to:

- Automate manual document parsing and reduce reliance on time-intensive Excel workflows.
- Integrate multiple data sources into a unified, scalable system.
- Provide General Partners (GPs) with timely, accurate insights for decision-making.
- Build a secure, cloud-native platform that could handle large data volumes while supporting seamless user interactions.

2

Solution

The project was delivered as a Minimum Viable Product (MVP) within six months, focusing on automating workflows and optimizing data processing at both asset and portfolio levels.

1. **Automated Document Parsing:** AI-driven parsing of Excel files using Python and AWS SageMaker, with structured data stored in PostgreSQL.
2. **Client-Facing Platform:** Built with React for intuitive data visualization and interaction.
3. **Seamless Data Interactions:** Robust NestJS-based API enabling integration across systems.
4. **Scalable Data Pipeline:** AWS-powered infrastructure (S3, SQS, SNS, Lambda) supporting high-volume data handling.
5. **AI-Driven Risk Assessment:** Machine learning models for evaluating credit risks, market volatility, and geopolitical exposure.
6. **Data Aggregation and Analysis:** Advanced analytics tools providing actionable insights for GPs.

Results at MVP Stage

- **Processed 500,000 rows of client-submitted data and scaled to store up to 20 million records.**
- **Supported 1,000 concurrent users on the React platform with minimal latency.**
- **Positioned the client for growth with a scalable, secure, and data-driven solution.**

Following the MVP launch, the platform is now in Version 1.1 development, expanding functionality to support a wider range of investment workflows and deliver greater value to CRE stakeholders.