March 2024

AI/ML AUGMENTED SEISMIC DATA MONITIZATION

Oil & Gas Industry

K. A. CONSULTANTS

KHALIDALHOSNI.COM

ABOUT K.A. CONSULTANTS

K. A. Consultants specialize in the development of domain-specific language models through our proprietary **orYx models**. These models are meticulously tailored to meet the specific needs of diverse business users, encompassing crucial aspects such as predictive analytics, private data management, customer metrics, and industry-specific requirements.

We leverage the unique value of combining open-source industry data with internal management data to empower clients in decision-making.

WHAT WE DO

GPT Language Models

Our Domain-specific GPT language models are trained on specialized datasets within a particular sector, allowing them to understand and generate text with a level of expertise and nuance that general models lack. Their specialized focus enhances their performance, making them invaluable tools for professionals seeking AI assistance tailored to their specific needs.

AI/ML Process Models

Our Artificial Intelligence and Machine Learning models excel in behavioral analysis and ROI-based scoring by analyzing vast datasets to identify patterns, trends, and correlations in behavior that are not apparent to humans. This capability allows for precise personalization, targeted strategies, and the development of products or services that meet specific customer needs.

"Leveraging artificial intelligence to improve efficiency, predictability and performance in seismic acquisition and processing."

USE CASE

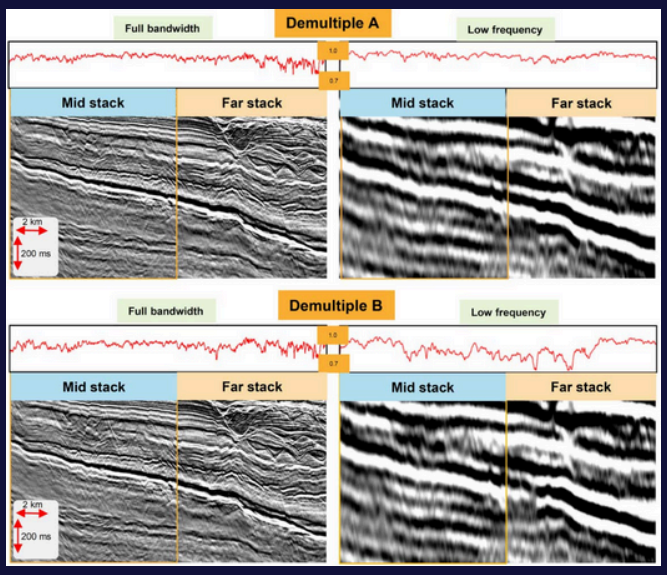
Monetizing Seismic Data

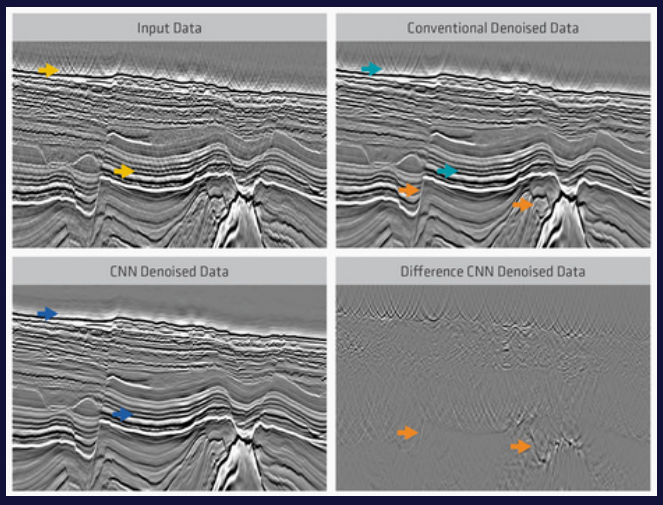
This use case assesses the feasibility of monetizing proprietary "Upstream Oil Exploration Data." Leveraging advanced AI techniques, the proposal aims to explore both technical and commercial viabilities. This project will include an in-depth technical assessment using AI for seismic analysis, a thorough market analysis identifying potential buyers and demand, and a strategic approach towards maximizing the value of the exploration data.

Technical Assessment

This project will include an in-depth technical assessment using AI for seismic analysis, a thorough market analysis identifying potential buyers and demand, and a strategic approach towards maximizing the value of the exploration data. Our expertise in AI data analysis positions us uniquely to deliver actionable insights

with our expertise in advanced data analytics, AI-driven solutions, and Open-Source Intelligence "OSINT" unit is committed to delivering exceptional insights and strategies.





Competitive Analysis

Competitive players in the field including CGG, BGP, WesternGeco, Searcher, Seismic Exchange Inc., Geophysical Pursuit Inc., PGS, and Schlumberger (SLB) will be assessed thoroughly by our open-source intelligence team to identify ongoing trends in technical and commercial terms, including their data presentation styles, showcasing channels, and tactics. This will be compared with the seismic data quality and relevance against vailable data in the market.

SCOPE & OBJECTIVES

Scope

- **Data Intelligence**
  a. Assessing the current state and quality of proprietary upstream oil and gas exploration data.
  b. Implementing AI tools and techniques for enhanced data analysis, focusing on identifying patterns, trends, and insights that can add value to the data.
  c. Proposing methods to refine and enrich the data, making it more valuable and marketable.

- **Market Analysis**
  a. Researching current market trends and demand for upstream oil exploration seismic data: Acquisition stage, Processing, and Reprocessing.
  b. Identifying key competitors and their strategies in the data monetization space.
  c. Targeting industries and organizations that could benefit from purchasing or accessing this data.
  d. Developing a pricing model that reflects the value of the data while remaining competitive.

- **Feasibility Study**
  a. Evaluating the technical viability of processing and monetizing the exploration data.
  b. Assessing the economic potential and return on investment for monetizing the data.

Objectives

- **Provide Comprehensive Analysis:**
  - Deliver a detailed report on the technical & commercial viability of upstream oil exploration data.

- **Enhance Data Value:**
  - Utilize AI and data analytics “processes” to enhance the quality and marketability of the seismic data. (extra AI processing is applicable pre-delivery, not part of this project)

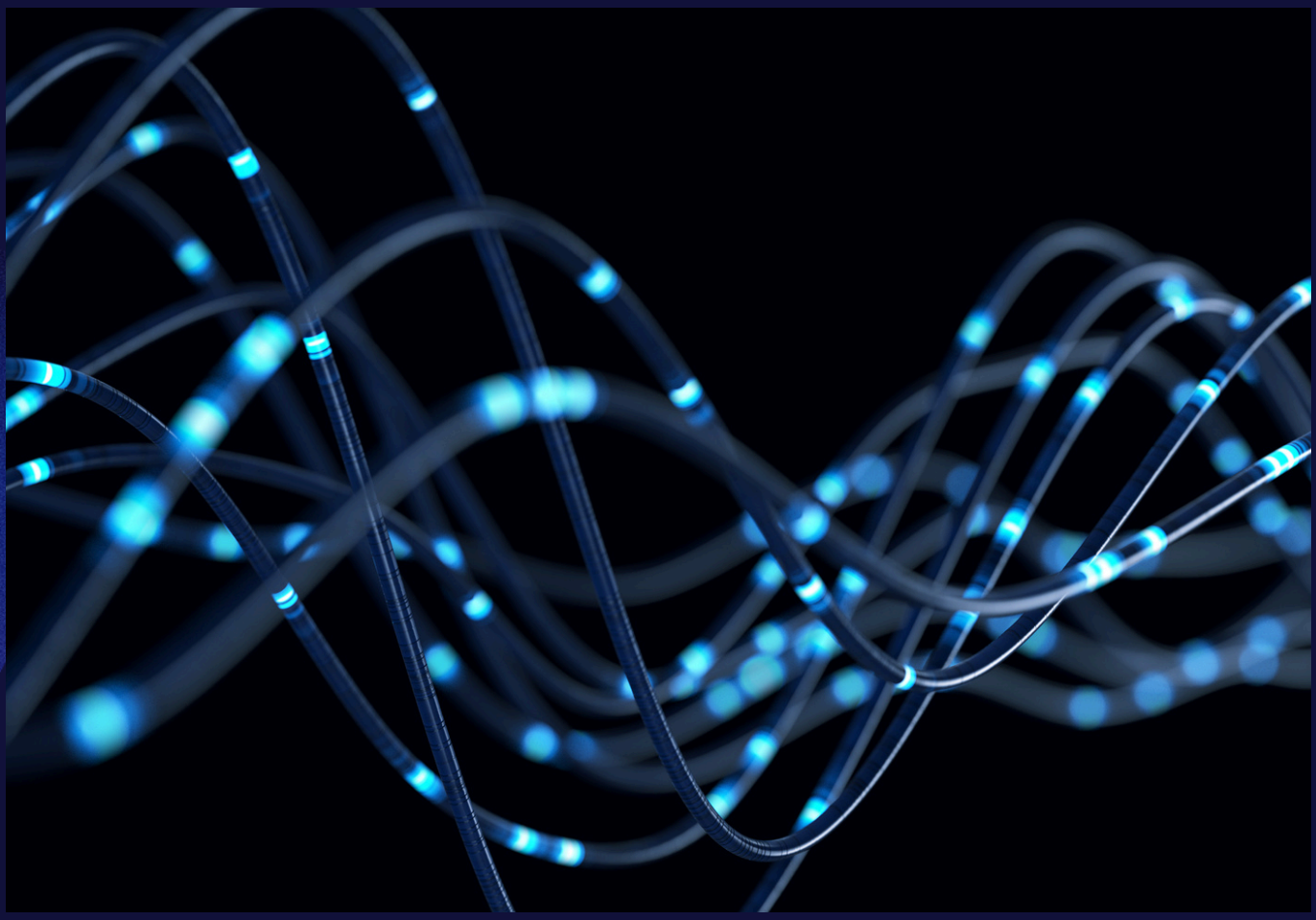
- **Identify Market Opportunities:**
  - Explore and identify potential markets and buyers for the monetized data.

- **Develop a Strategic Plan:**
  - Formulate a strategic approach for monetizing the data.

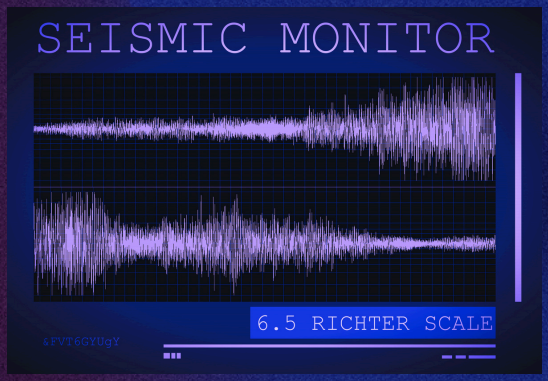
- **Assess Financial Viability:**
  - Provide a financial model that outlines potential revenue streams and return on investment.

- **Offer Recommendations:**
  - Offer recommendations based on the analysis, aiding in decision-making regarding their data assets and extra processing needed for higher viability.

Enhancing the Data !!



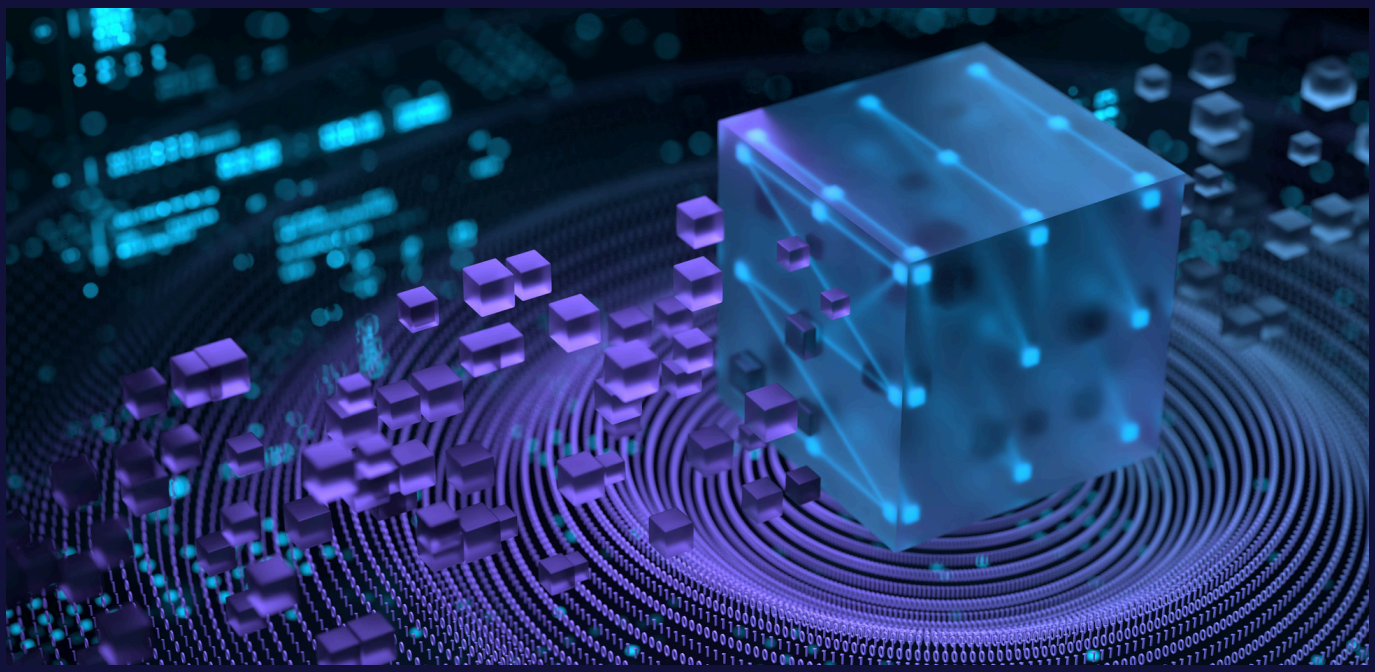
By understanding what the market needs, we tailor the processing efforts to be more effective and reach prospective customers more swiftly.



The global market for oil and gas upstream seismic data is a crucial niche within the broader energy sector, integral to identifying and evaluating potential hydrocarbon reserves. This market encompasses the acquisition, processing, and interpretation of seismic data to map and understand subsurface geological formations. Key players include both large oil and gas companies with extensive exploration programs such as CGG, Schlumberger, and TGS, who offer advanced seismic acquisition and data processing technologies. We enhance data interpretation, making seismic data more valuable. The monetization of acquired seismic data presents significant benefits to oil and gas extractors. By selling or licensing this data, companies can recoup some of the substantial costs involved in exploration activities.

TECHNICAL ASSESSMENT

- **Current Data Infrastructure and Quality Analysis**
  - Assessment of existing data infrastructure, including data storage, management systems, and security protocols.
  - Evaluation of the quality, completeness, and relevance of the current upstream oil exploration data.
- **Application of AI in Seismic Analysis**
  - Assessment of AI and machine learning techniques that can be applied to enhance seismic data analysis for reprocessing and enhancement.
  - Identifying AI models most suited for pattern recognition, anomaly detection, and predictive analytics in seismic data.
- **Integration with Other Data Sources**
  - Integrating seismic data with other relevant data sources (like geological surveys, historical production data, etc.) to provide a comprehensive view of oil exploration potential for value emhancement.
- **Scalability and Future-Proofing**
  - Assessing the scalability of the proposed AI solutions to handle increasing data volumes in the future pre-sale of data.
  - Ensuring that the AI systems are adaptable to evolving technologies and future industry needs.
- **Compliance and Security**
  - Ensuring that all technical solutions comply with data standards.
  - Implementing robust security measures to protect sensitive data.
- **Technical Feasibility Report**
  - Comprehensive report detailing the feasibility, challenges, and opportunities of applying AI to upstream oil exploration data.
  - Recommendations for technical upgrades and investments required to achieve the project objectives.



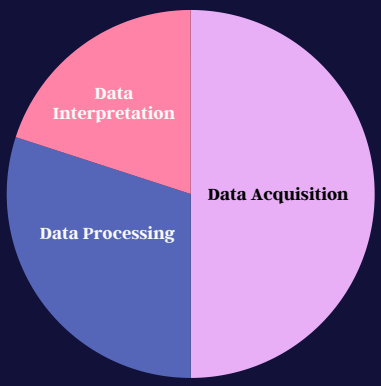
Seismic Survey Global Market

Growth Rate CAGR 5.4% 2024-2033

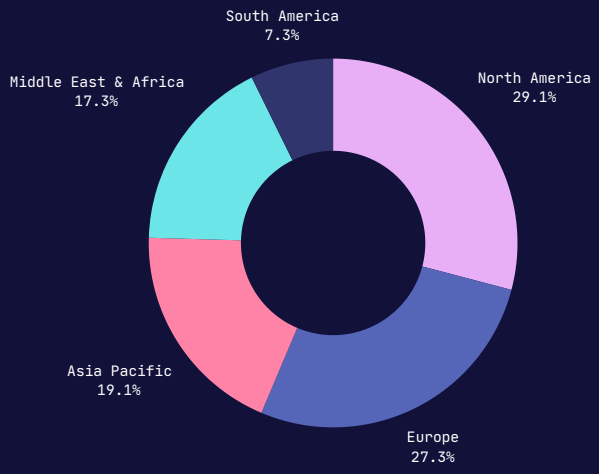
Market Size in 2024 USD 10 billion

Segments:

- **Type**
  - Reflection, Refraction, Surface-wave.
- **Service Type**
  - Data Interpretation, Data Processing, Data Acquisition.
- **Deployment**
  - Onshore, Offshore
- **Technology**
  - 2D Imaging, 3D Imaging, 4D Imaging.
- **Application**
  - Oil and Gas, Geological Exploration, Mining
  - Other Applications



Seismic Data Global Market



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