Extracting Deeper Insights with Artificial Intelligence

The fields of data analytics and data science have traditionally been the backbone of mathematical insights for business decisions, but with waves of disruption in the field of artificial intelligence (AI), these insights and their impacts have been transformed to the next level. Data is the fuel of AI, and the world is producing over 2.5 quintillion bytes of data per day. The AI domain is vast and truly impressive. It spans comprehending human speech, training autonomous vehicles, predicting fraud, recognizing images and text, developing recommender systems, and simulating military missions.

Incorporating AI into your organization allows you to **automate and accelerate business processes**, **mine data to predict** a myriad of business accelerators and enhancers, either autonomously or cooperatively, and **reduce labor costs** while **driving business and organizational value** with cognitive engagement. AI enables data-driven decisions and predictions by **performing high-speed data crunching and automation beyond human ability**. Guidehouse provides end-to-end support to our clients with the capabilities to identify the best approaches through software/tool selection, algorithm development, and solution deployment.

The Guidehouse Approach to AI

Guidehouse strives to help organizations navigate this new paradigm and accelerate digital transformation. We have domain knowledge that expands across various industries, including energy, healthcare, financial services, applied sciences, and public sector agencies. The figure on the left illustrates our proven approach that enables us to deliver the best tools to meet your organization's needs. Our team members employ wide-ranging skill sets, including AI, robotic process automation, intelligent automation, cloud, data analysis, and more. Guidehouse has helped Fortune 100 companies and government agencies effectively leverage AI across a diverse range of challenges, such as comprehending human speech, predicting fraud, safeguarding critical infrastructure, and helping understand and minimize the impact of modern diseases. Our comprehensive AI practice leverages the best tools across the full AI technology landscape, delivering innovative, easy-to-scale, and technology-agnostic solutions from strategy and proofs of concept to full-scale implementation and production.

AI Capabilities

Guidehouse's AI and machine learning (ML) experts specialize in comprehensive ML techniques and methodologies, including **time series forecasting, anomaly detection, classification modeling, image recognition, chatbots and natural language processing (NLP)**. We have proven success in leveraging cutting-edge ML algorithms and advanced visualizations into one seamless, user-friendly, sustainable, and highly available and scalable cloud-based platform.

Guidehouse AI Approach

1. Identify Business Requirements & Data Sources
2. Collect, Prepare, & Explore the Data
3. Develop Model
4. Communicate & Visualize Results
5. Deploy & Integrate into the Business Workflow
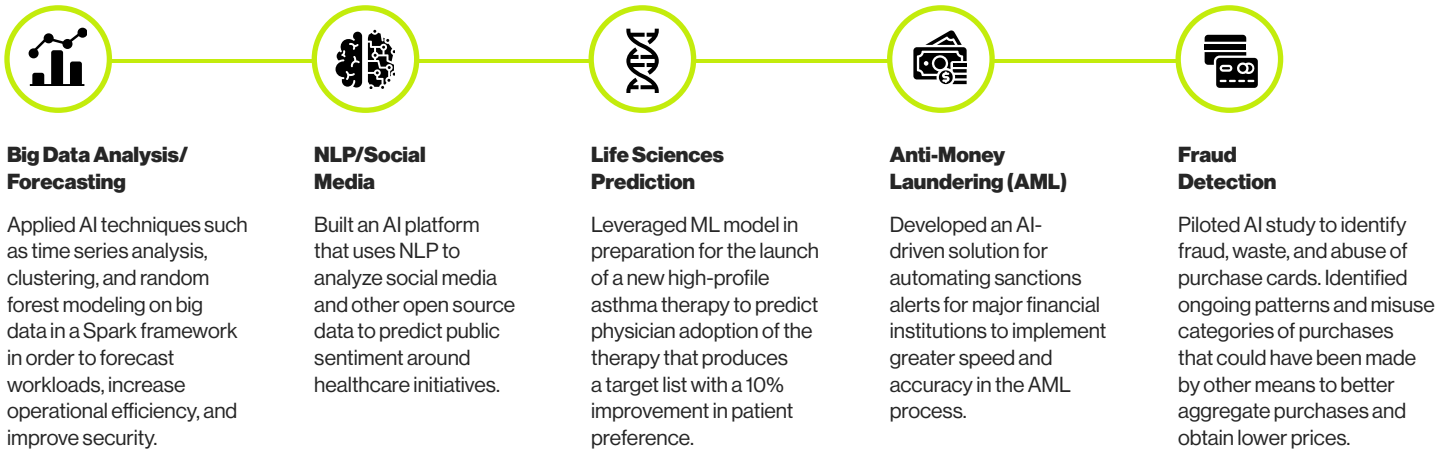6. Monitor & Maintain within the Enterprise

AI Strategy

Organizations that achieve AI success build two distinct strategies that work in unison to amplify each other. One strategy **maximizes the business potential** and its advantages in the marketplace, while the other **minimizes the risks that this emerging AI capability produces**. Our team collaborates with you to create and advance your AI strategy. We ensure that it is based on the intersection of strategic business priorities with AI capabilities, succesfully crafted along with a strong foundation of enabling capabilities and governance. Guidehouse has experience at crafting AI strategies for large organizations and federal government departments that advance AI as a strategic mission enabler. We provide actionable frameworks for emerging AI ethical standards and regulation and help strengthen your existing data strategy.

Additionally, our team of experts helps your organization plan for disruptive innovations in technology that can create new markets and changes in consumer behavior. Guidehouse not only leverages AI with innovations such as blockchain, the Internet of Things, big data, and quantum computing to develop disruptive solutions for your organizations, but we also work with you to prepare and strategize for how these new technologies could impact your organization in the future.

AI Research

Guidehouse is committed to staying on the leading edge of AI innovation. Our internal research and development efforts strive to learn and test the newest and most powerful solutions, as well as to develop our own innovative approaches so that we can bring the best AI to you. Our AI team is very active in the open source community; we have participated and won multiple national technology challenges. Additionally, our experts have published peer-reviewed papers on applying AI in healthcare, as well as white papers on society's toughest issues, like suicide prevention, opioid addiction prevention, smart grid, and more.

Use Cases

Big Data Analysis/ Forecasting

Applied AI techniques such as time series analysis, clustering, and random forest modeling on big data in a Spark framework in order to forecast workloads, increase operational efficiency, and improve security.

NLP/Social Media

Built an AI platform that uses NLP to analyze social media and other open source data to predict public sentiment around healthcare initiatives.

Life Sciences Prediction

Leveraged ML model in preparation for the launch of a new high-profile asthma therapy to predict physician adoption of the therapy that produces a target list with a 10% improvement in patient preference.

Anti-Money Laundering (AML)

Developed an AI-driven solution for automating sanctions alerts for major financial institutions to implement greater speed and accuracy in the AML process.

Fraud Detection

Piloted AI study to identify fraud, waste, and abuse of purchase cards. Identified ongoing patterns and misuse categories of purchases that could have been made by other means to better aggregate purchases and obtain lower prices.

Wherever you are in your digital transformation journey and your AI maturity curve, Guidehouse has the experience, talent, and dedication to help you. Our team looks forward to taking on new clients, with the goal of advancing your organization through AI techniques. Please contact us at **ai-automation@guidehouse.com.**