Guidehouse
Outwit *Complexity*

An AI-Powered Framework for Case Complexity

For organizations with business problems that require case analysis to approve or deny a request, artificial intelligence (AI)-powered case complexity frameworks can help streamline the review process to decrease backlogs and reduce workloads.

Case complexity business problems are increasing workloads and stretching workforces thin, resulting in backlogs and bottlenecks across the public and private sectors. Case complexity problems can result from individuals requesting access to a benefit or resource ranging from IT service desk support or product refunds to disability benefits or U.S. citizenship. The review process for cases can vary widely in terms of time and resources required, with common bottlenecks such as 10% of cases sometimes consuming 90% of overall resources. Good case management helps reduce errors and improve speed, improving the overall process efficiency and effectiveness.

Across companies and agencies, there is an increasing need for technology solutions that address these backlogs. At Guidehouse, we leverage AI and machine learning (ML) to build unified data models that address case complexity problems. As most cases involve many inputs and attributes that can influence approval, these complex inter-variable relationships can be modeled to accelerate case processing in real time. By developing a set of processes and rules to determine the complexity of a case, organizations can automate case processing, guide case evaluation, and prioritize human resources more effectively. Doing so is critical to workforce optimization, since it increases processing speed, reduces errors, and saves significant work hours.

Guidehouse Streamlines Case Complexity

As the organizational impact of case complexity increases, it's critical that organizations categorize cases by complexity in real time as they're received. Leveraging advanced analytical tools and techniques to do so can reduce the time it takes to adjudicate cases, guide case assignment, assist with resource allocation, and enable more accurate workload predictions. These strategies can help realize significant return on investment (ROI) and free up staff for more value-added tasks.
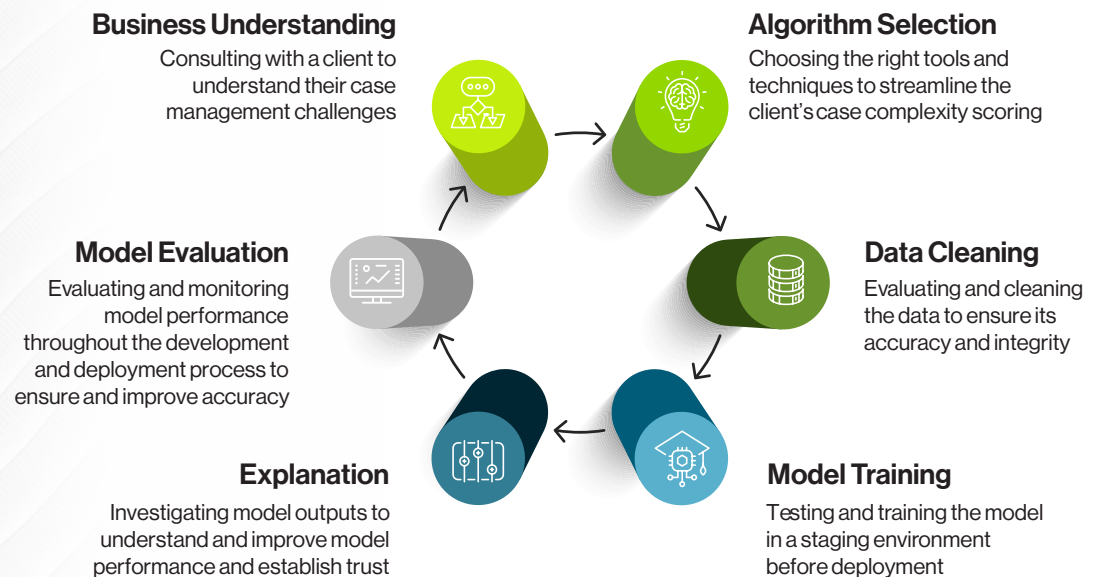
Guidehouse's experts use open-source tools and technologies to deliver solutions that support the case management process. By leveraging ML to perform automated predictions that classify the complexity of a particular case, organizations can prioritize high-probability approvals and quickly move them through the pipeline. They can also automate denials for reasons related to incorrect submissions and ascertain key features of applications that will help improve complexity scoring. Leveraging these technologies for a quick and easy deployment of a tool transforms the adjudication process and saves significant time and effort.

Privacy and Compliance

Data involved in solving a case complexity problem frequently includes highly sensitive information. Guidehouse leverages the best data privacy and compliance tools and has extensive experience dealing with a variety of compliance frameworks to enable us to deploy solutions that meet requirements in any industry, including:

- **General Data Protection Regulation (GDPR)** – European Union data protection and privacy regulations
- **National Institute of Standards and Technology (NIST**) – security standards and protocols for US federal agencies
- **Health Insurance Portability and Accountability Act (HIPAA)** – US standards to protect patient health information
- **Cybersecurity Maturity Model Certification (CMMC)** – an assessment framework designed to support compliance with NIST and other cybersecurity standards
- **Defense Acquisition Regulations Systems (DFARS)** – uniform acquisition policies and procedures for the US Department of Defense

Guidehouse's Case Complexity Process

Business Understanding
Consulting with a client to understand their case management challenges

Algorithm Selection
Choosing the right tools and techniques to streamline the client's case complexity scoring

Data Cleaning
Evaluating and cleaning the data to ensure its accuracy and integrity

Model Training
Testing and training the model in a staging environment before deployment

Explanation
Investigating model outputs to understand and improve model performance and establish trust

Model Evaluation
Evaluating and monitoring model performance throughout the development and deployment process to ensure and improve accuracy

Case Study: Clearance Applications

At a federal agency, Guidehouse was tasked with deploying a model to improve the processing of security clearance applications over a six-month period. In a double-blind study that measured the algorithm against human officers, we achieved 99.5% accuracy. The project provided never-before-realized efficiencies and insights into the agency's case management process and delivered significant ROI.

Conclusion

By deploying AI frameworks to tackle case complexity, organizations no longer need to choose between backlogs that compromise the case management process and the cost of adding additional staff. With the right technology, the case management process can be streamlined to optimize workforces, reduce human error, and improve the speed and quality of decision making. Case complexity frameworks realize significant ROI for organizations in a short period, reduce the strain on workforces, and ensure a timelier delivery of decisions to stakeholders.

With increasing adoption of case complexity frameworks, Guidehouse's experts can be your trusted advisors in implementing them for your organization. We'll leverage our experience deploying successful implementations and technology-agnostic approach to develop and customize a solution that solves your complex case management challenges.

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About Guidehouse

Guidehouse is a leading global provider of consulting services to the public sector and commercial markets, with broad capabilities in management, technology, and risk consulting. By combining our public and private sector expertise, we help clients address their most complex challenges and navigate significant regulatory pressures, focusing on transformational change, business resiliency, and technology-driven innovation. Across a range of advisory, consulting, outsourcing, and digital services, we create scalable, innovative solutions that help our clients outwit complexity and position them for future growth and success. The company has more than 13,000 professionals in over 50 locations globally. Guidehouse is a Veritas Capital portfolio company, led by seasoned professionals with proven and diverse expertise in traditional and emerging technologies, markets, and agenda-setting issues driving national and global economies. For more information, please visit **www.guidehouse.com**