Semi-Custom Applications

Enterprise applications and related services to solve your hardest text data-related business problems.

General-purpose business intelligence tools aren’t built for you; they’re built for organizations like you. When you need to solve a data-related business problem with unique requirements, such as custom data processing, specific technology integrations, or internal database hookups, these systems tend to drop the ball. This problem intensifies when your project involves text data. Off-the-shelf platforms limit your ability to analyze complex data types, create custom output, or integrate into your larger data analytics infrastructure.

Where others fall short, Lexalytics goes further. We combine our natural language processing (NLP) toolkit with 15 years of services experience to build “semi-custom” analytics applications that solve your hardest text data-related business problems. We start by sitting down with you to understand exactly what you’re trying to achieve, the context you’re working in, and why other providers don’t meet your needs. Then we customize our NLP product suite with features and technology suited to solving your exact business problem.

Where other providers require large commitments, we reduce your risk with a staged Proof of Concept approach. Our projects start small, building on the foundation of our existing technology stack to quickly prove the viability of our solution. Then we build out and scale up. The result is a bespoke business intelligence application that delivers tangible outcomes across your organization, faster and for less cost than other providers.
CASE STUDIES

MEDICAL INFORMATION DEPARTMENT OPERATIONS

The Medical Information Department at Biogen Japan, a large biotechnology firm, wanted to reduce time-to-answer for patient inquiries and lower the number of calls escalated to valuable medical directors. Executives knew that a system to directly answer patient questions would be unreliable and expensive. Instead, they turned to Lexalytics for an application to help contact center operators find answers and resources more quickly.

First, we combined our core NLP with machine learning models trained on Biogen’s data to understand the relationships between conditions, drugs and therapies. Then we built a custom user interface that presents each agent with best-fit answers to the patient’s primary questions, along with related SmPCs, PIBs and other resources to clarify relationships and interplays. The entire process takes seconds to provide consistent, reliable answers.

FINANCIAL SERVICES DISCLOSURE COMPLIANCE

A major financial services company needed help ensuring compliance with federal disclosure mandates in Statement of Advice (SoA) documents. Before, the firm’s auditors manually reviewed a small number of SoAs each week. This process was slow and unreliable.

Lexalytics focused on improving the firm’s existing audit process, reducing their initial commitment. First, we trained our semi-structured data parser to understand the underlying structure of SoA documents. Then we configured our NLP to identify, extract and analyze entities within each section. Finally, we built a connector to structure and export this data into an easy-to-scan spreadsheet.

This system substantially reduces the firm’s non-compliance risk by empowering compliance auditors to review hundreds of SoAs in minutes. Now they can quickly and reliably spot missing disclosures, suspicious recommendations, and other areas where advisors may not be working in their clients’ best interests.
# Technology Components

## Natural Language Processing Features

Feature-complete NLP toolkit, constantly under development with new libraries, configs and models.

<table>
<thead>
<tr>
<th>Feature</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sentiment Analysis</td>
<td>A tool for identifying sentiment in text.</td>
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<tr>
<td>Theme Analysis</td>
<td>A tool for identifying themes in text.</td>
</tr>
<tr>
<td>Entity Recognition</td>
<td>A tool for identifying entities in text.</td>
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<tr>
<td>Categorization</td>
<td>A tool for categorizing text.</td>
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<tr>
<td>Intention Extraction</td>
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<tr>
<td>Summarization</td>
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## Semi-Structured Data Parsing

A powerful tool for identifying and extracting data within PDFs, .docx files and other structured documents while understanding the layout, format and relationships of each text element.

## Machine Learning

Custom machine learning models to tackle unique challenges in your data, such as normalizing entity lists or improving sentiment accuracy for ambiguous phrases.

## Add-ons and Integrations

- Low-level NLP configuration
- Custom user interfaces
- Specific technology integrations
- Feedback loops for model training
- User and project management tools
- Database/warehouse hookups
- Upload wizards and connectors
- And more...
PROOF OF CONCEPT PROCESS

The goal of a Lexalytics Proof of Concept (PoC) is to quickly demonstrate how we can use our technology toolkit to solve your business problem. This diagram is a deliberate simplification of our process. No two projects are exactly alike, therefore no two projects follow the exact same process. Communication is key to every PoC; and we’re constantly re-evaluating our approach based on what we learn with each step.

1. REQUIREMENTS GATHERING: We sit down with you for an in-depth discussion of your business needs and unique challenges.

2. DATA EXPLORATION: We use your data to quickly demonstrate how we can use our software toolkit to meet your objectives. For projects with machine learning or user interface components, this is where we train the models and wireframe the UI.

3. SYSTEM BUILD-OUT: Once you’re satisfied with the initial results, we scale things up. This includes building the UI and integrating other technologies as needed.

4. TESTING AND EVALUATION: You run a full evaluation with your end users, looping us in to ask questions, clarify outcomes, and tweak the system on the fly.

5. DECISION AND NEXT STEPS: We discuss how things went, review what we’ve learned, and talk about where we’ll go from here.
Lexalytics processes BILLIONS of text documents every day, GLOBALLY.

We help our clients unlock the full value of their text data through the Lexalytics Intelligence Platform® and “semi-custom” enterprise applications.

Our solutions combine natural language processing, semi-structured data parsing, and machine learning to reveal context-rich patterns and insights within comments, reviews, contracts, medical files and other complex text documents.

Enterprises and data analysts rely on Lexalytics to improve customer experiences, reduce employee turnover, manage regulatory compliance and more.

For more information, visit www.lexalytics.com or call 1-800-377-8036