

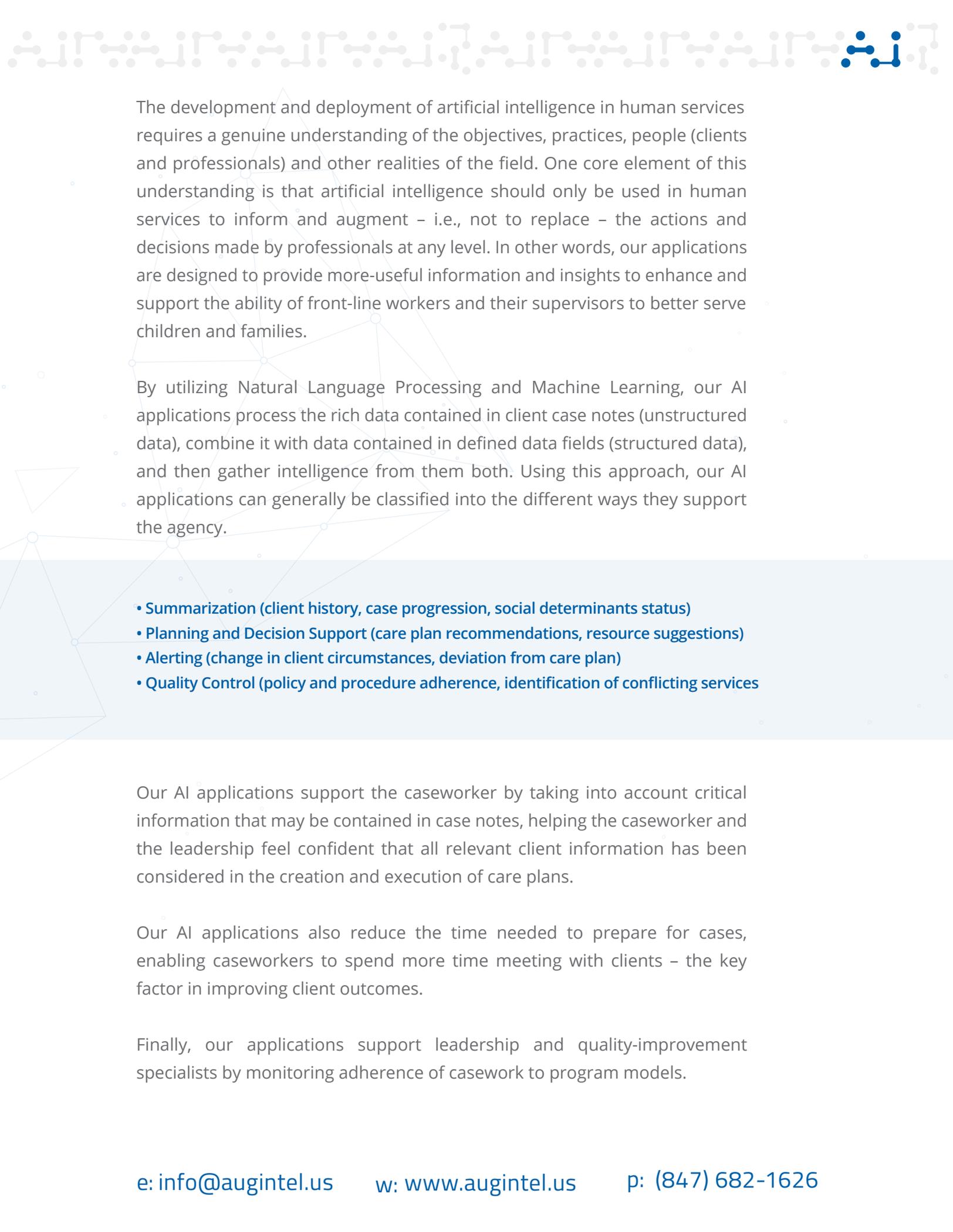
**Augmented
Intelligence**

Solution Brief: Artificial Intelligence

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The development and deployment of artificial intelligence in human services requires a genuine understanding of the objectives, practices, people (clients and professionals) and other realities of the field. One core element of this understanding is that artificial intelligence should only be used in human services to inform and augment – i.e., not to replace – the actions and decisions made by professionals at any level. In other words, our applications are designed to provide more-useful information and insights to enhance and support the ability of front-line workers and their supervisors to better serve children and families.

By utilizing Natural Language Processing and Machine Learning, our AI applications process the rich data contained in client case notes (unstructured data), combine it with data contained in defined data fields (structured data), and then gather intelligence from them both. Using this approach, our AI applications can generally be classified into the different ways they support the agency.

- **Summarization (client history, case progression, social determinants status)**
- **Planning and Decision Support (care plan recommendations, resource suggestions)**
- **Alerting (change in client circumstances, deviation from care plan)**
- **Quality Control (policy and procedure adherence, identification of conflicting services)**

Our AI applications support the caseworker by taking into account critical information that may be contained in case notes, helping the caseworker and the leadership feel confident that all relevant client information has been considered in the creation and execution of care plans.

Our AI applications also reduce the time needed to prepare for cases, enabling caseworkers to spend more time meeting with clients – the key factor in improving client outcomes.

Finally, our applications support leadership and quality-improvement specialists by monitoring adherence of casework to program models.

The following table describes each of these applications in more detail. Each column contains a category of applications.

AI Applications:

Summarization / Case Preparation	Planning & Decision Support	Alerting	Quality Control
<p>Client History Timeline</p> <p>This application provides case managers with a visual timeline of relevant events in a client's history, raising confidence that they are aware of as much information and context as possible --while saving preparation time for client meetings.</p>	<p>Program Recommender</p> <p>This application provides case managers with recommendations on which programs may be most effective in supporting case managers' decisions, based on their own training and experience. The goal is to align any recommendations with the case manager's intuition and experience, thereby increasing confidence about the assigned program (including for managed care).</p>	<p>Change in Circumstance Identifier</p> <p>To help case managers determine if action is required for a specific client, this application alerts them to documented changes in the client's circumstances that require review -- and can communicate it to others in the agency or on the client's care team who should also be aware of the alert.</p>	<p>Service Duplication Notifier</p> <p>To ensure the fidelity of data in a client's record, this application confirms that answers provided in assessments align with information contained in case notes. This enables continuous monitoring and quality improvement at an individual/client level, which is a common requirement of prevention programs.</p>
<p>Client Case Progression Timeline</p> <p>This application provides case managers with a visual timeline of how the client is progressing compared to agency benchmarks and metrics. This tool is similar to the Client History Timeline, but shows a different aspect of the case.</p>	<p>Goal Recommender</p> <p>This application provides recommendations that case managers can factor into their thinking/decisions on the goal(s) that could yield the best outcomes for a specific client. Like the Program Recommender, it is designed as a tool to supplement assessment data, training and experience/intuition.</p>	<p>Safety Issue Identifier</p> <p>To help behavioral health professionals determine if action is required for a specific client, this application alerts them to documented client safety issues -- and can communicate it to others in the agency or on the client's care team who should be aware of the alert. This tool is comparable to the Change in Circumstance Identifier above.</p>	<p>Case Notes Quality Monitor</p> <p>To ensure the integrity of data in a client's record, this application warns leadership if case notes have been copied and pasted, or if people are billing for services outside of guidelines and are not eligible for particular programs. The result is to enable continuous monitoring and improvement of program quality, which is a common requirement of prevention programs.</p>



AI Applications (Continued):

Summarization / Case Preparation	Planning & Decision Support	Alerting	Quality Control
<p>Case Notes Summarization</p> <p>This application provides case managers with concise summaries of client histories in specific timeframes and domains.</p>	<p>Action Recommender</p> <p>This application recommends actions that can best support assigned goals. Like the Program Recommender and Goal Recommender, this tool provides case managers with additional input to inform their decision making.</p>	<p>Confidentiality Warning</p> <p>This application provides important guidance to case managers by highlighting information within case notes that is or may be considered confidential (recognizing that the ability to share sensitive data is of primary concern to any professional interacting with a client).</p>	<p>Service Duplication Notifier</p> <p>Because a client often receives services from multiple agencies -- or from multiple programs within an agency -- this application highlights if/when any of these services are duplicative or conflicting. Case managers can use the resulting information to refine a client's plan, streamline processes and, potentially, save money.</p>
<p>Client Strength, Interest and Value Identifier</p> <p>This application provides a list of the client's strengths, interests and values to help case managers tailor their communications and planning.</p>	<p>Resource Finder</p> <p>This application identifies information in the case notes that can inform which resource(s) would be a good fit for the client, such as a foster family, permanent/adoptive family, behavioral health provider or other service provider. This application can also be extended to search for these resources.</p>		<p>Case Manager Policy and Procedure Adherence Monitor</p> <p>This application reviews an agency's policy and procedure documentation, then reviews individual client progress described in case notes, and finally checks to make sure that the services being provided are following prescribed guidelines. This tool offers a systematic way to ensure that all professionals are continually trained to provide services according to agency policies, procedures and standards of practice.</p>
<p>Social Determinants of Health and Well-Being Status Identifier</p> <p>This application enables the agency to track the status and change(s) in the social determinants of health and well-being relevant to a specific client. If/when appropriate data-sharing agreements are in place, this data can be shared with the client's physical and/or behavioral health provider to inform a treatment plan.</p>			<p>Agency Policy, Procedure and Contact Adherence Monitor</p> <p>This application checks to ensure that agency-level guidelines pertaining to the population served are being followed with respect to contractual obligations.</p>