

Solution Brief

Retail, Enterprise Use, Cities
Artificial Intelligence



Emboldening Innovation through Streamlined Application Development with Iterate.ai's Low-code AI Platform Solution

The Interplay platform, powered by Intel® Xeon® processors and optimized with the Intel® Distribution of OpenVINO™ toolkit, empowers businesses to swiftly develop and deploy AI solutions. Iterate.ai helps make AI more accessible by removing data science complexities through an intuitive low-code environment and a suite of ready-made applications.

accelerated by **intel.**

About Iterate.ai

Iterate.ai are passionate about empowering businesses with cutting-edge AI tools and technologies. Their mission is to accelerate innovation, foster collaboration, and drive transformative solutions across industries. Whether you're a startup or an established corporation, Iterate helps you to dream big and build fast.

The Burden of Developing AI Solutions

It's no secret that businesses today are quickly embracing AI solutions to enhance their operations and grow their profitability. Whether it's driving efficiency, helping spur innovation, or creating new revenue opportunities, businesses are recognizing the value of AI across diverse industries and its adoption only continues to grow. For cybersecurity and customer service industries alone, already over half of business owners are using AI.¹

However, developing and deploying AI solutions can be a complex journey.

- Having the right talent in place to develop AI models is challenging amidst a developer shortage for AI applications
- Even small AI development teams can be exceedingly expensive, costing a business upwards of \$400,000 per year in technology development costs alone²
- Often the few technical experts a company has may need to shift focus from innovation to deployment, support and maintenance, creating bottlenecks that slow progress, reduce efficiency, and ultimately consume costly resources³
- Businesses that are new to AI development lack standardization practices, which increases the time and cost of development³
- Customizing solutions to match with legacy systems and messy data sources only makes incorporating new AI technologies more complicated

To minimize the time and money spent in development, businesses from large enterprises to small retail stores are looking for low-code environments to facilitate AI integration. By bridging the gap between technical and non-technical staff, low-code AI tools provide a more streamlined approach, reducing the resources required for solution development. To unlock the full potential of AI and operate at scale, businesses are turning to AI environment partners like Iterate.ai.

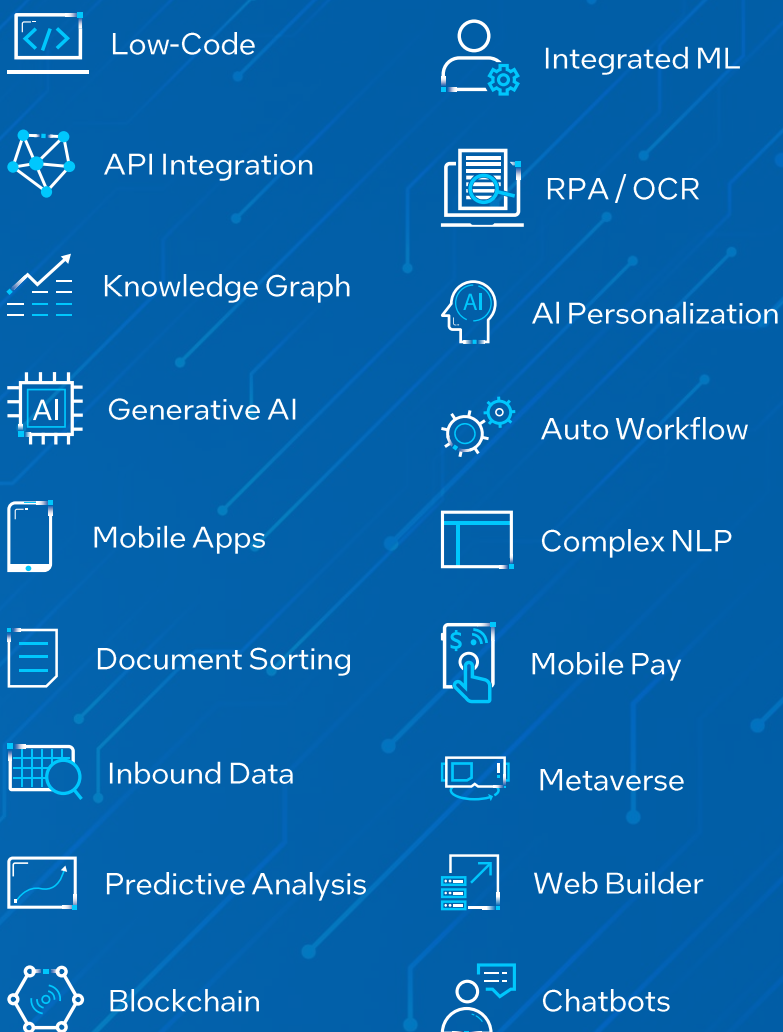
The Iterate.ai Interplay Platform

As a low-code, drag-and-drop AI platform, Iterate.ai's Interplay is able to remove the complexities of application development, expediting time to market and enabling innovation at scale. To streamline the development process, the Interplay platform offers modularized pre-coded blocks users can easily navigate and use to build an application that meets their needs. By offering these pre-coded blocks for AI, IoT, Blockchain, database, communications protocols, and third-party API integrations, Interplay enables innovative applications to be rapidly developed, commercialized, and then pushed into production environments.

To help businesses incorporate AI into existing business workflows, Interplay provides nodes that connect seamlessly to legacy platforms, ecommerce systems, and emerging technologies, supporting 4000+ external integrations. This allows businesses to build chatbots, voice, natural language processing, AI, Blockchain and data applications, connecting to numerous data sources to support a variety of applications. Users can also build their own code and add it to the platform to further customize their solutions and extend their functionality.

Additionally, Interplay is hardware and cloud agnostic, providing it the ability to deploy apps across edge, data centers, and cloud for rapid and secure scalability all powered by technologies such as Docker and Kubernetes. At its core, Interplay allows businesses to develop apps faster, meet growing digital needs, and upskill existing resources to help them navigate a competitive marketplace.

Interplay application platform capabilities



Platform Benefits

- End-to-end capabilities – Supports end-to-end AI capabilities from data analysis and computer vision to advanced generative AI capabilities such as LLMs and more
- Legacy integration – Ability to integrate with legacy systems via connectors or API-less environments
- Flexibility and customization – Runs in the cloud as well as on-premise systems. End-users can maintain and manage custom workflows and extend the applications
- Speed – Build solutions faster with prebuilt apps using existing teams
- Security – Containerized architecture scales while maintaining high security standards

Iterate.ai's Interplay serves as the engine for other ready-made use case solutions, including Iterate.ai's License Plate Recognition application, Drive-thru application, their new Generate application, and more.

Iterate Applications

**Interplay License
Plate Recognition
Application**

Interplay Drive-thru
Application

Interplay
Generate

Interplay License Plate Recognition (LPR) Application

License plates provide critical data points that business can use to drive customer experience. From understanding time spent in a quick service queue and being able to recognize customers, to maintaining customer safety, license plate detection is a helpful tool for businesses across industries.

Iterate.ai has developed an advanced AI license plate recognition application that can be integrated into existing platforms across retail and customer service interactions. Simultaneously, there are ongoing security and safety concerns from retail, public areas, and transport hubs that LPR can help address. In these scenarios, LPR can be used to alert safety personnel and enhance the ability of supervisors to track and identify multiple cars in any given space.

Iterate.ai can swiftly implement license plate recognition by leveraging existing camera systems. Interplay servers and software can be deployed onsite for faster AI image recognition by minimizing bandwidth requirements. The AI platform can handle any number of cameras, from a single location with fewer than five cameras to large campuses with thousands of cameras and video feeds.

Interplay LPR has been trained to specifically deal with adverse weather conditions such as snow, rain, fog, and more. This includes conditions between the camera and the plate, and occlusions such as snow accumulation on the vehicle. Interplay can fully handle moving car license plate recognition, such as from toll booths or street-side cameras.

Key Capabilities



Alerts for
approaching
customers



Automated
security screening



Identification of
authorized vehicles in
designated zones



License plate
tracking in restricted
and secure areas

LPR In Action

A large gas station and convenience store chain was looking to develop a frictionless gas and order pickup system for their locations to better serve their customers and enhance the customer experience. Deploying Interplay LPR meant connecting and maintaining camera connections across thousands of cameras in a low-latency network while ensuring Interplay is running on an edge server. By connecting not only to the camera network but also the enterprise-level customer database system, the solution can ping a customer's mobile phone to confirm the customer, unlock the gasoline pump, and finalize the transaction. The company deployed the solution across Europe, compliant with the strict GDPR and data privacy regulations, and is running in over 4000 edge instances.

Iterate Applications

Interplay License
Plate Recognition Application

**Interplay Drive-thru
Application**

Interplay
Generate

Interplay Drive-thru Application

Drive-throughs today are enjoying increased customer traffic, but high volumes of customers can increase wait times and staffing shortages make it difficult to manage taking orders and attending to customers in the front of the store. This, in addition to challenges such as hearing customer orders in noisy environments, can lead to inaccurate and substandard transactions. Interplay Drive-thru uses a large language model (LLM), or an AI-assisted experience, to alleviate that pressure and enhance the experience for customers and employees alike. The Drive-thru application enables staff to save time and focus on important customer and food-related tasks.

The Interplay Drive-thru LLM-powered speech recognition platform is designed to create a natural conversational experience to take customer orders accurately and efficiently. The solution seamlessly integrates with existing hardware infrastructure such as menu boards, microphones, and speakers. The platform can help employees keep up with demand and even suggest items to encourage upselling and help increase sales.

Easily deployable at the edge, even in remote locations, and with simplified management capabilities, franchise owners can empower their local store managers by reducing staffing costs and customer queue time. The model operates locally and has been optimized by Intel® Xeon® Scalable processors to make language processing even faster.

Key Capabilities



Automate listening and response, navigating challenging and noisy environments



LLM runs locally on the edge, making processing cheaper and faster



Trainable menu for LLMs



Real-time statistics tracking for managers

Interplay Drive-thru In Action

A large multinational quick service restaurant was looking to automate their drive-thru ordering process and streamline the customer drive-thru experience. By leveraging the Interplay Drive-thru LLM capability, they are removing bottlenecks from their drive-through process. The time saved by implementing the solution allows their employees and kitchen to spend the extra time ensuring the quality of items produced while maintaining order accuracy and constant management of new drive-through customers.

Iterate Applications

Interplay License
Plate Recognition Application

Interplay Drive-thru
Application

**Interplay
Generate**

Interplay Generate Application





Large enterprises have a wealth of information at their disposal yet often are slowed down as internally siloed data and vast documentation make it difficult to find relevant information. The Generate application enables enterprises to use generative AI to search internal documents and produce reports and substantive answers to critical business questions.

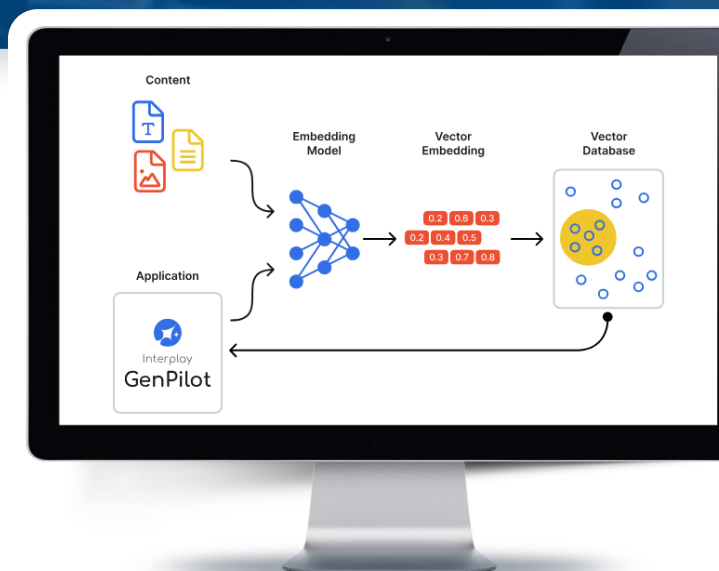
Interplay Generate allows an organization to leverage multiple LLM applications within the enterprise. The application can pull from IT policies, HR policies, standard operating procedures, and any information companies are housing on their private network and would like to pull data from. Generate can read various document types and formats within the enterprise at the same time with connections to common file and database systems, ensuring the extraction of relevant content. Users can ask the LLM for comprehensive summaries, differences between documents, unique terms among documents, and shared terminology or phrases.

Applicable for large enterprises, the application runs privately and securely within a business, either on-premises or on a private cloud. LLM interactions utilize connected data as context for generated responses, while staying completely confidential within the organization. This configuration maximizes security and conforms to IT requirements, including firewall, access rights, and data management policies.

Interplay enables support teams, customer relations, and research analysts to pull information from documents across databases without using a single line of code. Any advanced business user can fully leverage the private LLM with straightforward prompt engineering.

Key Capabilities

-  Search databases, format graphs, and return database code
-  Summarize data, analyze trends, and allow for LLM Q&A
-  Augment text to retone, rephrase, or rewrite text
-  Summarize actions and suggest follow-up emails



Interplay Generate In Action

A global luxury brand approached Iterate to develop a document search application that can ingest private industry research documents and generate an analysis with suggestions for brand strategy. By leveraging Generate, they were able to generate an analysis that helped inform their marketing approach to position against competitors.

Intel Technology Perfectly Complements the Interplay Platform and Portfolio of Applications

Regardless of whether the solution is being deployed on a private cloud or on the edge, Iterate's system runs on top of Intel technology. Two key technologies are the Intel® Distribution of OpenVINO™ toolkit and Intel Xeon processors, which allow Interplay to optimize the performance and speed of their platform and applications.



Intel® Distribution of OpenVINO™ Toolkit

The high-performance, deep learning inference toolkit provides a full suite of development and deployment tools. The toolkit offers deep-learning models, device portability, and higher inferencing capabilities to offer minimal disruption and maximum performance and enables developers to quickly build, optimize, and scale AI-based computer vision models. This makes it easier to convert modules to take advantage of existing Intel processor architectures. By optimizing their solution with the OpenVINO™ toolkit, Iterate.ai was able to improve the accuracy and speed of their processing abilities.

Intel® Xeon® Processors

These processors are built specifically for the flexibility to run complex AI workloads on the same hardware as existing workloads. With AI acceleration and optimization that goes silicon deep and ecosystem wide, Intel Xeon Scalable processors help increase model optimization.



Conclusion

Iterate.ai's Interplay solution is a low-code, drag-and-drop AI platform that provides businesses with a more streamlined approach to developing AI solutions. Purpose-built to expedite development and optimized with Intel® technologies, Interplay enables businesses to realize innovative solutions and get to market faster. In addition to the platform, Iterate.ai offers a range of ready-to-use applications. This includes Interplay Drive-thru, which optimizes chain restaurant experiences with automated, real-time listening and response at the edge. Meanwhile, the Interplay LPR application enables the identification of customers and supports frictionless payment for more convenient shopping experiences. For large-enterprises, the Generate application empowers companies to use generative AI to search and generate answers based on internal documentation. Regardless of the industry, Interplay can help build powerful AI solutions faster. To find out how Interplay can help your business contact sales@iterate.com.

Learn More

To learn more about Iterate.ai visit

- [Iterate Website](#)
- [Iterate and Intel Enhance Performance Blog Post Powerful Use Cases and Customer Success Stories. | Iterate.ai](#)

To learn about Intel technologies visit:

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- [AI tools from Intel Product Page](#)
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With Intel technologies and capabilities, a vendor's optimized offering can go beyond the traditional compute and extend to accelerated networking, storage, edge, and cloud. It's all part of helping customers build an optimized infrastructure across the company.

Sources

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2. [Cost of AI in 2024: Estimating Development & Deployment Expenses](#), Akkio website, 2024
3. [Beyond Innovation: Overcoming Challenges In Developing And Deploying AI Models](#), Forbes, 2023

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