Aixplain Simplifies Access to AI Applications

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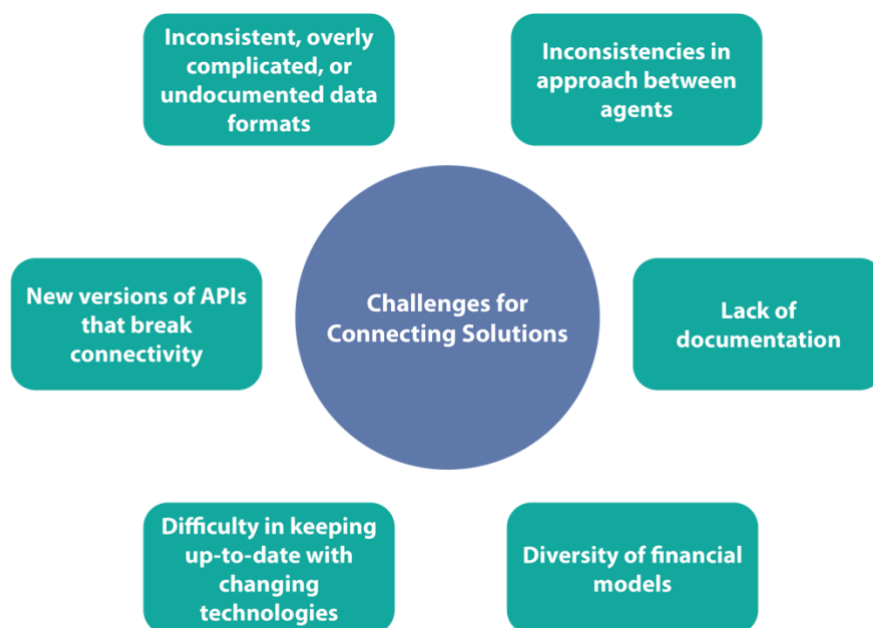
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Understanding the Complexities of Integrating AI

Connecting AI and NLP tools through APIs can represent a significant investment of time and talent that can make it cost or time prohibitive for language companies and enterprises. That's because tools are often created by developers for developers, use different or arcane data structures, are poorly documented, aren't standardized for easy connection, or in the case of academic projects, may not be maintained or hosted in easily accessible ways (Figure 1). This problem intensifies when stitching together multiple language-specific tools, corpora, or other resources.

Figure 1: Challenges of Connecting Solutions

Inconsistent, overly complicated, or undocumented data formats

Inconsistencies in approach between agents

New versions of APIs that break connectivity

Challenges for Connecting Solutions

Lack of documentation

Difficulty in keeping up-to-date with changing technologies

Diversity of financial models

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As a result, language companies and enterprises typically require a specialist to map data structures and write converters, a skill set that can be difficult to find. They want

production-ready solutions that simplify these integrations. Without them, it's hard to unlock the multilingual data resources they control and enable them to build "small AI" applications to solve specific problems that larger systems cannot or simply do not address ("Small AI for Language Technology").

That's where Aixplain comes in. Hasan Sawaf, CEO and founder of Aixplain set out to create a single platform to support discovering, benchmarking, and connecting AI resources within a common interface. At the heart of Aixplain is an agent called Bel Esprit that allows implementers to describe tasks in natural language statements – for example, "extract all names of individuals and replace them with placeholders." Aixplain then takes those instructions, identifies resources available in the third-party Aixplain marketplace to implement them, and combines those resources to create custom no-code solutions. It handles all the connection and data mapping behind the scenes.

The key to the company's approach is a step that converts each resource or tool into an agent that can respond to queries about its results. Bel Esprit serves as a control layer that brings the needed agents into contact with each other and mediates the data flows (Figure 2). These agents can also incorporate language or other professionals for tasks that require human judgment or evaluation, so implementers can create hybrid or augmented workflows. Over time the agents can learn and improve, evolving to building better systems.

Figure 2: Architecture of Aixplain with Bel Esprit as the UI for Building Services
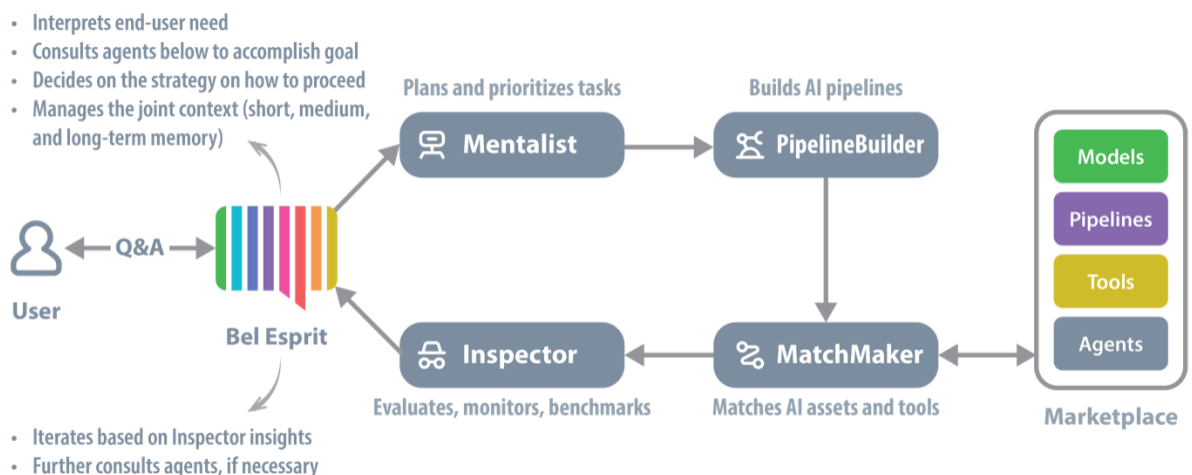
Source: Aixplain

Aixplain also addresses a major challenge for many implementers in that it handles rights and access management, greatly simplifying the financial aspects that can arise for workflows that might otherwise require separate contracts for dozens of agents. The creators of those agents also benefit because they can receive payments for what they have built without needing to maintain financial connections to all users. Once their solutions are converted to agents, the creators benefit from the broader applicability of their solutions in the Aixplain platform because they can be deployed in more contexts.

In a separate call, to test the system, we set up a simple automated content enrichment (ACE) system that scanned text to identify items in text and link to Wikipedia articles ("TechStack: Automated Content Enrichment"). These systems typically require a dedicated development effort, but in Aixplain it took us less than an hour to build. The resulting application needed about 30 lines of Python code – and could have used some further refinement – but it was entirely functional and usable with minimal effort. Where it is needed, Aixplain can create any needed code as a professional service or leave to the implementer. In this case, the logic was simple enough that even an entry-level programmer could maintain it.

Aixplain currently has access to more than 35,000 AI models of various sorts, including open-source and commercial resources built by developers both large and small (Figure 3). It can use any major cloud-computing platform to host computational needs and supports multiple geographies to address data sovereignty and security concerns.

Why It Matters

When LSPs and enterprise language teams alike cite the high cost of building AI-based systems as one of their primary challenges, anything that can simplify the process is welcome. Because of its scope and its use of low-code approaches, Aixplain aims to be an attractive option for groups of all sizes, but particularly for those with limited budgets or technical teams. It will help them by:

- **Reducing the technical burden for building solutions.** With Bel Esprit, companies can build AI workflows by describing what they want to achieve and letting the system find the best options and connect them. This requires less effort than building connectors between systems and reduces or eliminates the need to find which systems can work.

Figure 3: The Aixplain Marketplace Provides Access to a Wide Variety of AI Models
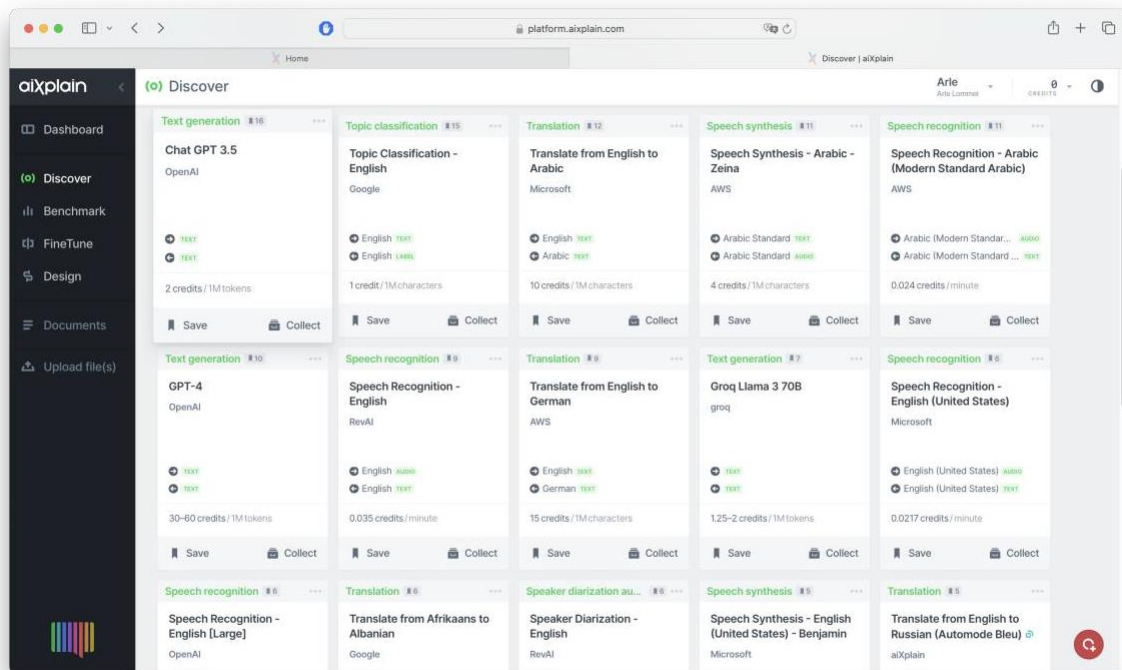
Source: Aixplain

- **Lowering costs.** With a pay-per-use model, implementers do not need to worry about setting up individual contracts with each provider and trying to align subscriptions and licenses. In addition, they can easily change models if needed without worrying about breaking a contract.

- **Managing risks.** Many LSPs and enterprise teams tell us that they are hesitant to build AI solutions due to the technology changing so quickly, and they worry about committing to approaches that may be outdated in just a few months. Because teams can easily migrate between agents as needed in Aixplain, they can reduce this risk and easily incorporate new approaches and resources as they become available.

What It Means

Although access to AI is increasingly democratized, it remains expensive and difficult to implement beyond ad hoc solutions. As GenAI hype grew in 2023, many companies worried that it would grant a business advantage to the largest players and leave

smaller LSPs and teams unable to compete or take advantage of solutions at scale. Although these fears abated somewhat in early 2024, they remain a substantial concern for many.

Aixplain helps remove many of the barriers that prevent wider adoption. The approach it takes can reduce friction and technical burdens in implementing AI and ultimately facilitate its adoption across the entire language sector. Although others may build competing solutions, the approach it takes points to a future in which AI is increasingly accessible. When combined with workflow automation technologies, it provides a way to deliver relevant AI anywhere, at any time, on any platform, and for any purpose. If it succeeds in becoming a default platform for building AI solutions for the language sector, it will open up new possibilities for efficiency, scalability, and applicability.

Related Research

- "TechStack: Automated Content Enrichment"
- "Small AI for Language Technology"
- "Blackbird.io: "Citizen Automation" of LangTech"