Natural Language Build versus Buy Considerations

Should you Build or Buy? This is one of the top questions customers and prospects struggle with.

A recent Gartner report predicts that only a fraction (as low as 15%) of AI projects succeed in delivering the expected outcomes that the business requires, and over half don't even make it out of the prototype stage. Why is that?

Based on our experience, there are varying reasons why almost 85% of AI/ML projects fail to deliver, and those include:

- Unable to build the infrastructure to support a new project
- Unable to dedicate the right people resources
- Unable to accurately predict business outcomes
- Unable to deploy models into the production business workflow
- Unable to build trust within the organization that the results are good enough to rely on

With all these factors and variables, as well as AI's relative novelty as a business-enhancing solution, it seems like the odds are stacked against most businesses. That's where expert.ai's experience can help.

With 250+ enterprise customers leveraging our Natural Language Understanding (NLU) technology to automate labor-intensive work, deep vertical domain expertise in many industries, and more than two decades of experience, we have implemented natural language (NL) solutions more widely than any other company in the market.

Focus on the Solution

When evaluating an enterprise technology solution to solve a business problem, there are many factors to take into account. In the realm of AI for natural language processing (NLP) / NLU in the first use case, there are both universal and specific questions that companies must consider. For example:

- Can we get the technology off the shelf with Open Source (OS) tools?
- Can we do it cheaper if we build with these off-the-shelf components ourselves?
- Should I be utilizing my internal talent pool that could build this?
- If we don't need all the features that we would be buying, can we just skip those and save the money?

These are fair and valid questions. Like most technology decisions in the enterprise, it comes down to ROI. Conventional thinking leads to: "if I build it myself, it will be cheaper." Maybe… but the first question that needs to be answered with specific clarity is: What is the objective of the project in the first place?

Example: "Your business needs a CRM… should you build or buy?" It's possible that dedicating software developers to create a CRM using open-source tools is cheaper than buying a ubiquitous Software as a Service (SaaS) Solution, but are there other considerations? What's the business objective? In the example, the objective is to generate a revenue forecast for the business across thousands of sales reps and allow those reps to manage their business. In this case, we are talking about a mission-critical solution that will help transform the business. Therefore, we need to ensure the following:

- The solution must deliver the expected business value
- The solution must be reliable for the end users to build adoption
- The solution must be deployed in an expected timeframe
- The solution must be well supported for bugs, upgrades and enhancements
- The solution must be portable and not owned by a single employee or small group of employees
- The solution must deliver a return on investment

If an AI solution fails to deliver these results, we will end up in the 85% category that Gartner has identified of failed AI projects.

For mission-critical technology most organizations understand the risks, and therefore, don't debate build vs buy. So why are AI and ML projects considered differently?

From Experimental to Mission-Critical Technology

Today, AI, and specifically, NLP projects have turned from being experimental to being a crucial step those companies must take to stay competitive. Organizations must learn to use these technology advancements to be better, faster, smarter and more efficient than the rest…otherwise, they'll miss out on opportunities that their competitors will take. That's why organizations must think of these projects as any other mission-critical technology investment—which they are.

In many cases, there are technical teams and individuals that are dedicated to and passionate about creating and deploying AI solutions, and they certainly don't want to be cut out of the equation. In fact, these technical users should be empowered, as should business users, to find the best solution for the problem at hand. Talented individuals surely CAN build on their own solution. The question is whether an organization trying to solve a business problem SHOULD build on their own.

This is precisely why expert.ai offers a solution that empowers businesses to 'build' on a platform that is proven to help deliver results.

The Formula for Success

When solving a business problem, the best solution is one that empowers your business to deliver results and that scales with your business over time. Here's how a build AND buy approach can yield better results:

1) Time to Value

2) Resource Optimization

3) Support

1. Time to Value

Most organizations looking to use AI, specifically NLP and NLU, are doing so with the objective of increasing efficiency, lowering costs and mitigating risk. They have set out to improve the bottom line and to empower their employees to be more efficient. This is mission critical, and a task not to be taken lightly.

An NLP/NLU project may sound simple, given the buzz around Large Language Models (LLMs), as well as practitioner familiarity and access, or even bias, towards open source. The thinking might be, "since they're available, why not use these models?" However, there is a tremendous amount of work that goes into development and production processes.

- If you plan to create your own NLP models, you must:
  - Identify the data > prepare the data > find the appropriate algorithm > create a workflow that ingests the data into the algorithm > annotate the data > tune the model > compare models for performance > deploy the model into a production workflow (with data ingestion from various sources, pre- and post- processing, and then determine what to do with the results, where they should go, how they should be viewed, who sees them, and what they do with them) > how to manage and monitor the model > create a feedback loop for continuous improvement/review.
- If you plan to use an LLM, once you get results, you'll still need to answer the question: Are the results good enough?

Out of all these steps, there are dozens of tools, libraries and services that will help complete these tasks, and do it well. BUT someone still must put it all together. Remember, 85% of AI projects don't make it into production. That's because orchestrating all of these tasks individually is incredibly complex and this is what leads to failure.

By deploying a purpose-built NLP platform—not a compilation of open-source tools, but a platform that has been built from the ground up to allow users to build, optimize and deploy NLP models into production—a business can ensure that the foundation of capabilities, the integration of different functions, and the usability is quality assured and field tested through hundreds of client engagements.

When an organization is on a mission to solve a problem and create value for the business, our experience shows that their time to value can be exponentially decreased by deploying a platform that is ready for teams to deliver value immediately by skipping the plumbing headaches, the data integration issues and data preparation tasks.

This brings us to resources.

2. Resource Optimization

Organizations that create their own NLP/NLU solutions usually have multiple teams working together on projects. These teams include business owners, data scientists and technology teams. Each party, rightfully so, wants to participate in the project and add value. Clients that have the shortest time to their MLP (minimum lovable product) and greatest success allocate their resources for maximum value, and they're able to do this once they deploy a platform that empowers them to build and deploy the NLP models into production as quickly and effectively as possible. Here's where each team should be focusing.

The **Line of Business** team should focus on driving the KPIs so they can prove that the business problem is being solved. They should be empowered to monitor the KPIs and have a feedback loop to the Data Science and Technology teams to voice their needs, their areas for improvement, as well as the wins they see.

If we want to ensure that the business stays in the "15% of projects succeed" world, they need to see results fast and communicate with the other teams for continuous improvement. If there is no communication, or requests back to the Data Science and Technology teams fall on deaf ears because they can't effectively or efficiently adapt their technology to the changing business requirements, then the progress vector veers off course.

The **Data Science** teams should focus on model training, model creation and model optimization in the context of ensuring that results are focused on solving business problems. These three aspects of the workflow are incredibly important for any machine learning project, and NLP/NLU is no different. Here's where teams need to focus:

- Model Training
  - What to annotate?
  - How should data be annotated?
- Model Creation and Performance Analysis
  - What algorithms should we use?
  - What parameters and hyper-parameters should we use?

- Which models yield the best results for Precision, Recall and F-Measure?
- **Most importantly, are we accomplishing the business objectives?**

- Model Optimization
  - How is the model doing in production?
  - How does the model perform over time?
  - What feedback are we receiving that we can use to enhance the model?
  - What are the changing business requirements, and how do we ensure the models stay aligned to the business goals?

When Data Scientists are provided with a platform that empowers them to focus on these high-value questions and allows them to deliver results without worrying about other factors, such as whether a specific function is going to work or whether an integration is needed for a specific algorithm, and so on, businesses see the best results. In an enterprise environment where competition is ripe with innovation, speed and efficiency, results will propel you forward.

The third team involved, based on the organization, could be an **Information Technology (IT), Digital/ Business Transformation** or other specialized team; we'll generalize and call this the **Technology Team**. Build vs buy becomes a consideration with these teams most frequently because, with all the open-source tools out in the wild, why wouldn't a team of knowledgeable and capable individuals want to build their own solution? Again, the discussion is NOT around whether they CAN build it, but whether they SHOULD. When a business sets out to solve a business problem, or to increase efficiencies, or to mitigate risk, we need to ensure that the business objective gets solved.

When organizations work to solve NLP problems on their own, these highly capable individuals end up spending valuable cycles (and payroll dollars) trying to integrate many different components together, trying to research what else they need, and working to debug issues on their own… which could take months if not longer—if ever achieved.

Successful organizations, the ones that land in the +15%, work to maximize their talent and kick off a project beyond the starting line. Why not provide a platform that gives everybody a valuable head start? Why not let the technology groups focus on finding new ways to integrate NLP into business workflows, building new connectors to more systems that can utilize the models and deliver even more value to other lines of business?

The goal is to maximize value from talent, ensure that individuals are focused on the highest value tasks, and provide an environment where everybody is working to their fullest potential to maximize business results.

The third, and final, reason why businesses don't need to choose between build vs buy…

3. Support, Support, Support

Going back to our example: If you are deploying a CRM that is responsible for predicting revenue and enables thousands of sales reps to manage their business, it's crucial that the CRM is operational. But what if it didn't work? What if on the last day of the quarter, everybody runs into a '404 Not Found' error when trying to access the CRM? Is it better to have a support number with an established business and a dedicated customer success team behind you that can get you operational as soon as possible—versus a few phone numbers for software developers that created the CRM? What if those developers are no longer with the company? You need to have the same conversation when deploying NLP solutions. This is no longer an experiment or a nice-to-have, but a business-critical component!

When organizations build on their own, they forfeit the ability to call a centralized support number when there are issues. By deploying a purpose-built platform that empowers users to create, develop, test and deploy NLP solutions, you know three things:

1. It is pre-tested. It will work. It has gone through the proper Quality Assurance (QA) cycles to ensure that it is enterprise ready.
2. If you run into issues, there is a whole team dedicated to assisting you 24/7.
3. Expert.ai's sole focus is building a platform for NLP. That's all we care about, so our customers know it will be future-proof for enhancements, updates and upgrades.

Expert.ai's goal is to enable companies to successfully deploy NLP projects into production to help them make money, save money, improve work and mitigate risk. Our entire organization, including experienced professional services, support and customer teams are dedicated to empowering our clients to understand how NL can add value within their organization.

We aren't new to this; we've seen it before. If an organization wants to successfully use NLP/NLU to accomplish business goals, then let's change the conversation from build vs buy and focus on how we can leverage a proven platform to build up the capabilities you need to drive value and ensure that results will follow.

Get Started

Contact expert.ai to learn more.



About us

Expert.ai (EXAI:IM) is a leading company in AI-based natural language software. Organizations in insurance, banking and finance, publishing, media and defense all rely on expert.ai to turn language into data, analyze and understand complex documents, accelerate intelligent process automation and improve decision making. Expert.ai's purpose-built natural language platform pairs simple and powerful tools with a proven hybrid AI approach that combines symbolic and machine learning to solve real-world problems and enhance business operations at speed and scale. With offices in Europe and North America, expert.ai serves global businesses such as AXA XL, Zurich Insurance Group, Generali, The Associated Press, Bloomberg INDG, BNP Paribas, Rabobank, Gannett and EBSCO.

www.expert.ai **info@expert.ai**

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