

TechNotes

with Jimmy Hsiao



Embracing the new frontier of AI

With the recent strides in AI development, we've all been asking ourselves: how can we implement these technologies into our businesses? AI is a new frontier that we all have to navigate; there is no simple answer or strategy. Similar to the inception of the Internet and the web, mere possession of these technologies does not adequately benefit our companies. Rather, it is how we leverage these tools to our advantage that really makes a difference.

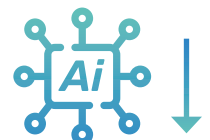
There are a plethora of ways to implement AI tools into our businesses. Efficiency, automation, predictive analysis, and business intelligence can benefit everyone in different ways. Whether it's LLMs like ChatGPT and CoPilot, or implementation of GPUs, adequate staffing and comprehensive training is consistently necessary in order to shape these tools to our business needs.

At Logic Solutions, we are strongly positioned to help other businesses implement artificial intelligence technologies. We have this experience through research and applications we've developed at Logic and at our sister company, Quantum Compliance.

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Here's an example from our work with Quantum that delivers Software as a Service (SaaS) tools in the Environmental, Health and Safety industry. When we first began using AI tools for Safety Data Sheets (SDS), documentation for companies to safely manage their chemical use, we needed to do the following.

First, we selected the right AI Large Language Model (LLM), then fine-tuned the prompts (prompt engineering), utilized the computation power of Graphics Processing Units (GPUs), and then integrated this with the rest of the software and database, in order to achieve the accuracy and performance level that we were targeting. Through iterative fine-tuning of the above process, we were able to increase the accuracy level to 99% of most GHS compliant SDS and the performance ten-fold. This is a clear application for us of the power of AI to benefit our clients.



This is what is so powerful about AI tools: By taking knowledge based on expertise, inputting it into a model, training the model, and then learning by iteration, we can build capabilities that empower significant outcomes faster to benefit our businesses and our customers.

In addressing the new frontier of AI technology, Logic is fortunate as a software consulting company, to have experience in overcoming new technological hurdles in the past. Because of this, we know how to build out a team with the capability to utilize and adapt to different types of technology and now in this case, AI technology. With this knowledge, we can really help in partnership with our clients to clarify how AI - and especially generative AI - really can help to solve their business problems.

From hardware to software, and even hosting services, we can act as the connectors between business needs and AI tools.

Here's the process for how we develop these AI solutions:

Developing AI Solutions that are Right for Your Business

- First, we Define the AI application requirements with you, the domain experts (whatever the domain--health, automotive, logistics, hospitality, etc.)
- Choose an AI model (most likely a Large Language Model (LLM)), and then
- Train the model to develop the application and improve results

You will also need to set up your ecosystem. That is the environment in which your AI application will function.

These are some of the decisions you will need to make:

Setting Up Your AI Ecosystem

- Define where the model lives – in the Cloud? Internally?
- How will you do OCR–Optical Character Recognition?
- What information goes out externally? What stays securely in-house?
- Do you have a need to fine-tune text to speech?
- What needs to be integrated to build your cohesive system?

Building Results Together

I want to be frank with you. We don't have all the answers! Every single AI implementation will act differently and require different processes. What we do have is the background and experience to identify and understand these technologies, and the commitment to discover how we can tailor the application of these tools to respective businesses to solve their business issues. As we work together with you, we will be able to achieve truly outstanding results.



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