



Generative AI for Product and Business Innovation Workshop and Training Curriculum

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Pre-class Preparation - Textbook

Generative AI history, opportunities, methodologies, LLM algorithms, MLOps

We provide an 80+ page long textbook. The purpose of the textbook is to get you up to speed with the Generative AI concepts that will help you during the training. In the textbook, we explore the foundational concepts, key players, and essential strategies for successfully leveraging generative AI techniques in the world of business and product development.

We begin by examining the fundamentals of generative AI and its role in business, before diving into its fascinating history and its rapid rise in popularity. We then take a look at real-world applications of generative AI, showcasing how it is already making waves in industries ranging from customer experience and product design to media, entertainment, and scientific research. As we delve deeper into the generative AI landscape, we introduce you to the major players and explore the current market trends. To ensure that you are well-equipped to apply generative AI to your own business, we provide detailed insights into the entire lifecycle of generative AI solutions, from the design sprint and strategy formulation to the operational aspects of AI implementation. Finally, we delve into the technical aspects of generative AI, covering essential algorithms such as Variational Autoencoders (VAEs), Transformer-based models, Generative Adversarial Networks (GANs), and Diffusion models.

By the end of the textbook, you will have a thorough understanding of the capabilities and potential applications of generative AI, empowering you to harness its power for innovation and transformation in your own organization.

Week 1 Workshop

Identifying opportunities for generative AI

Week 1 of our program is geared towards leveraging key innovation frameworks to identify viable opportunities in Generative AI. The session will kick-start with a deep dive into the Design Sprint methodology, a time-constrained, five-phase process that uses design thinking to reduce the risk when bringing a new product, service or a feature to the market. You'll be guided on how to condense months of work into a few hours to encourage problem-solving through the rapid creation of prototypes and the validation of ideas.

Next, we will delve into the Buyer Utility Map and Strategy Canvas from Blue Ocean Strategy. The Buyer Utility Map will assist you in identifying key areas in the buyer's experience cycle where generative AI could create compelling new utility. The Strategy Canvas will help you visualize the current state of play in the industry and reveal opportunities for value innovation.

Finally, the Four Actions Framework will be introduced, prompting you to consider how generative AI could be used to eliminate, reduce, raise, or create elements in your product or service offering. By the end of this session, you should be able to take a problem statement or idea and transform it into a compelling value proposition within the generative AI space.

Week 1 Homework

Interviewing users for idea validation

In Week 1's homework, your task is to validate the opportunities identified through user interviews. This critical phase involves direct engagement with potential users, allowing you to gather firsthand information about their needs, preferences, and challenges. Your conversations should be aimed at understanding the problem from the user's perspective and gaining insights into how the proposed Generative AI solution would fit into their lives. This exercise will not only validate or challenge your assumptions but also provide a rich source of qualitative data that can inform and refine your solution, ensuring its relevance and usefulness to your target audience.

Week 2 Workshop

Defining generative AI solution architecture

During the Week 2 workshop, we'll focus on defining the architecture for your Generative AI solution. This begins with a comprehensive review of the user feedback gathered from your Week 1 homework. By revisiting your proposed solution in light of this feedback, you can iteratively refine your idea, ensuring it continues to align with the needs of your users.

Once your solution is updated, we'll transition into breaking down the solution architecture. Here, you'll learn to identify the key components and processes required for your Generative AI solution, as well as how they interact. This will involve discerning the data inputs and outputs, the AI model type suitable for your solution, training and testing procedures, and more.

We'll pinpoint the specific Generative AI components for your project. We'll discuss Generative AI techniques selecting the ones most suited to your project's unique demands.

Week 2 Homework

Evaluating solution and cloud offerings

Week 2's homework tasks you with a crucial decision-making exercise: evaluating whether to buy, build, or rent your Generative AI solution. This process involves conducting thorough market research to understand the current offerings in the Generative AI space. You'll learn to appraise each solution based on its features, costs, scalability, and compatibility with your project needs.

Part of this exercise will also involve negotiation with potential vendors, wherein you'll articulate your Generative AI requirements, negotiate terms, and assess the vendor's capability to meet your needs. This practical experience will enhance your understanding of vendor management and the importance of clear, effective communication.

Finally, you'll identify Key Performance Indicators (KPIs) for your Generative AI solution. These metrics will help you measure and monitor the success of your solution, ensuring it is effectively addressing the problem statement and delivering the desired value. This exercise will foster a results-oriented approach to AI project management.

Week 3 Workshop

Utilizing generative AI for rapid prototyping

In the Week 3 workshop, we dive into the practical application of Generative AI for rapid prototyping. Here, you'll get hands-on experience using cutting-edge tools like OpenAI's ChatGPT and Google's Bard. These powerful AI models can generate software code and have wide-ranging applications in software solutions, offering the ability to prototype without writing

any code. Through these tools, you'll learn how to harness the power of generative AI to bring your ideas to life quickly and efficiently.

In addition, this workshop will also cover the non-functional requirements of generative AI solutions. These could include considerations around system performance, security, privacy, usability, and scalability. Understanding these requirements is crucial for the design of AI systems, as they directly impact the user experience and the solution's success in the real world. By the end of this session, you'll be well-equipped to bring your generative AI concept into a tangible, working prototype.

Week 3 Homework

Rapid prototyping

For your Week 3 homework, you'll dive into the fascinating field of rapid prototyping with OpenAI's ChatGPT and Google's Bard. Your task will be to create a tangible prototype of your Generative AI solution without writing any code.

ChatGPT and Bard are powerful tools that allow for the creation of software solutions. This task will challenge you to leverage these tools to bring your value proposition to life. You'll be working on transforming your solution architecture into a functional prototype, which may take the form of an interactive chatbot, a content generator, or other applications that fit your proposed solution.

While this may seem like a daunting task, you're not alone. Your instructor will provide support, guidance, and resources to help you 'glue' together the different components of your Generative AI solution. This hands-on experience will give you invaluable insights into the development process with data scientists and engineers, equipping you with the skills necessary to create innovative Generative AI solutions in the real world. Remember, the goal is not only to develop a working prototype but also to learn, explore, and push the boundaries of what's possible with Generative AI.

Week 4 Workshop

Risk analysis for generative AI and MLOps deployment

In Week 4's workshop, we'll address an often overlooked but vital aspect of AI projects: Risk Analysis and Management in Generative AI and MLOps deployment. This session starts with a demonstration of the final solutions developed by the class, giving you the chance to share your work and learn from others' approaches.

Next, we transition into understanding the deployment requirements of generative AI products and services. This covers the technical requirements for deploying your AI solution, as well as the MLOps principles that guide the operation of AI models in production environments.

However, the crux of this workshop is risk analysis. We will introduce you to a risk management framework tailored for generative AI projects. You'll learn to identify potential risks associated with your solution, such as data privacy concerns, model bias, or technology failure. We'll discuss strategies to manage and mitigate these risks, ensuring that your solution is not just innovative but also ethically sound and legally compliant.

Finally, you'll explore how to continuously monitor and govern these risks, an essential skill in the ever-evolving AI landscape. This holistic understanding of risk management will prepare you to responsibly and effectively implement generative AI solutions in the real world.

Certificate

Upon successful completion of the "Generative AI for Product and Business Innovation Workshop and Training", you will be awarded a certificate. This document serves as a testament to your newfound skills and knowledge in leveraging Generative AI for innovative solutions. We encourage you to proudly share their certificates on LinkedIn, showcasing your competencies to potential employers, colleagues, and the wider professional community. This certificate signifies a significant achievement and a step forward in your journey as innovative leaders in the field of AI.

Post-training

The end of the training is the beginning of your Generative AI product management journey and AI Product Institute is there for you along the way. You can join the weekly AIPM Club meetings to ask any questions, network or hear about the latest advancements. Also, you can ask the instructor any questions you may encounter in your projects even months after the training,

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