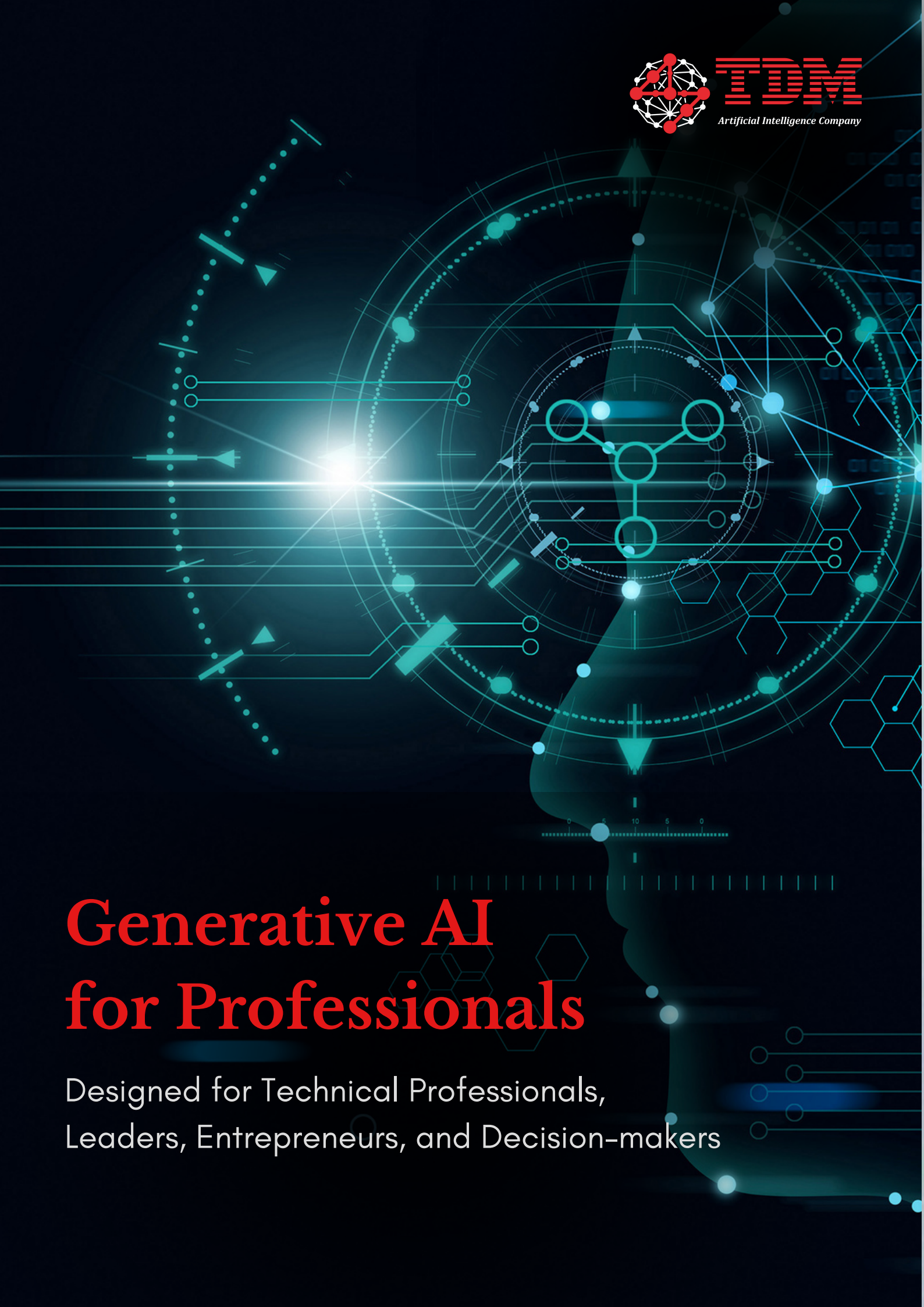


Generative AI for Professionals

Designed for Technical Professionals,
Leaders, Entrepreneurs, and Decision-makers

Table of Content

TDM
Artificial Intelligence Company

Artificial Intelligence (AI) could contribute a staggering $15.7 trillion to the global economy by 2030

PwC (PricewaterhouseCoopers)

“Generative AI has become a force for innovation, competitiveness, and positive change in the business world.”

Arshad Khan

Founder / Chief AI Product Design & Innovation

03 Weekends

Online Live Streaming

TIMING: **9** AM - **1** PM (PDT)

1. About the Course

Overview

This course, presented in a dynamic, executive-style format, is tailored to optimize your engagement with expert instructors and fellow learners. It focuses on fostering critical and systematic thinking regarding the role of generative AI in the business realm, highlighting both its potential value and associated risks. The curriculum is designed to equip you with the skills needed to initiate, manage, and expand transformative generative AI projects within your organization. The course content offers a comprehensive understanding of this cutting-edge technology, integrating it with practical business scenarios. It covers four key sectors where generative AI has shown exceptional promise: enhancing and personalizing customer service, optimizing supply chain operations, revolutionizing marketing and sales strategies, and providing robust engineering support.

2. Why Take This Course?

Tailored for professionals and entrepreneurs eager to harness the power of generative AI, this course aims to enhance productivity, streamline business processes, spark creativity, propel growth, maximize investments, and boost customer satisfaction. It's an ideal learning opportunity for C-suite executives, leaders in technology and innovation, senior managers, and seasoned practitioners from various sectors. Participants will gain a comprehensive insight into the exciting realm of AI, exploring its potential to generate and capture value in a myriad of business applications.

3. Program Highlights

- Interactive learning with a blend of theoretical knowledge and practical exercises.
- Focus on the latest tools and technologies in AI, such as LaMDA and LangChain.
- Hands-on experience in customizing and applying LLMs to solve real-world problems.
- Emphasis on ethical AI practices and responsible implementation.

This structured 3-Weekends bootcamp is designed to provide a comprehensive understanding of AI and its applications, with a special focus on LLMs and Generative AI. Participants will gain both theoretical insights and practical experience, enabling them to apply AI technologies in their respective fields effectively.

4. Course Content

Here's a comprehensive breakdown for a 3-Weekends bootcamp syllabus, with each weekend divided into morning and afternoon sessions, focusing on different aspects of Artificial Intelligence, Machine Learning, and Large Language Models (LLMs):

Weekend 1

Foundations of Artificial Intelligence, Machine Learning, and Deep Learning

Morning Session: Introduction to Artificial Intelligence

- Overview of AI: History, key milestones, and current landscape.
- Distinction between AI, Machine Learning, and Deep Learning.
- Real-world AI applications and their societal impact.

Afternoon Session: Deep Dive into Machine Learning and Deep Learning

- Core concepts of Machine Learning: Supervised, Unsupervised, and Reinforcement Learning.
- Introduction to neural networks, CNNs, and RNNs in Deep Learning.
- NLP basics relevant to LLMs: TF/IDF, Word Embeddings (Word2Vec).

Weekend 2

Exploring Large Language Models and Generative AI

Morning Session: Generative AI and Large Language Models

- Deep Dive into Generative AI: GANs, Transformer Models.
- Understanding LLMs: Architecture and functioning of models like GPT-3, BERT, DALL-E, T5.
- Special focus on Google's LaMDA for conversational AI.

Afternoon Session: Customizing LLMs with LangChain and Personal Data

- Using LangChain for advanced language model applications.
- Hands-on workshop: Customizing LLMs with personal or industry-specific data.
- Exploring the practical application of LLMs in various sectors.

Weekend 3

Practical Applications and Industry-Specific Use Cases

Morning Session: Implementing AI in Business and Industry

- Strategies for integrating AI into business operations.
- Examining AI use cases in key sectors: Healthcare, Real Estate, Edtech, and Sales and Marketing.
- Discussion on ethical considerations and AI governance.

Afternoon Session: Live Hands-On Project and AI Implementation Workshop

- Participants work on a Live Hands-On Project, implementing AI solutions for a real-world problem in their industry or area of interest.
- Workshop on AI project development stages: Ideation, Data Collection, Model Training, and Deployment.
- Final presentations: Sharing project ideas, receiving feedback from peers and instructors.

5. Detailed Syllabus

Here's a comprehensive breakdown for a 3-weekends bootcamp syllabus, with each weekend divided into morning and afternoon sessions, focusing on different aspects of Artificial Intelligence, Machine Learning, and Large Language Models (LLMs):

Weekend 01

Foundations of Artificial Intelligence, Machine Learning, and Deep Learning

Saturday Session: Introduction to Artificial Intelligence

Objective: To provide a foundational understanding of AI, its history, and its impact on modern technology and society.

- **Overview of AI:** Tracing the evolution from early concepts to today's advanced AI systems. Discussing key milestones in AI development.
- **AI vs. Machine Learning vs. Deep Learning:** Clarifying the distinctions and relationships between these fields.
- **Real-World Applications:** Examining how AI is being used in various industries such as Finance, Healthcare, Edtech, Fashion and Real Estate.
- **Interactive Discussion:** Participants share their experiences and expectations with AI.

Use Case: An exploration of AI in the finance industry, focusing on how AI is used in fraud detection and risk assessment.

Sunday Session: Deep Dive into Machine Learning and Deep Learning

Objective: To delve deeper into the concepts of Machine Learning and Deep Learning, providing participants with a solid understanding of how these technologies power modern AI.

- **Core Concepts of Machine Learning:** Exploring different types of machine learning: Supervised Learning, Unsupervised Learning, and Reinforcement Learning.
- **Introduction to Neural Networks:** Understanding the basic structure of neural networks and their role in deep learning.
- **Deep Learning in NLP:** Discussing the application of Deep Learning in Natural Language Processing, essential for understanding LLMs.
- **Practical Exercise:** Participants engage in a simple machine learning task using a popular Python library (like scikit-learn).

Use Case: Utilizing machine learning for predictive maintenance in manufacturing. A case study where machine learning models predict equipment failures, reducing downtime and maintenance costs.

Wrap-Up and Q&A

- A session to address any questions from the Weekend's topics.
- Briefing on Weekend2, setting expectations for exploring Large Language Models and Generative AI.

Weekend 1 - Highlights:

- Comprehensive introduction to the world of AI, providing a broad perspective on its capabilities and applications.
- Hands-on learning experience through practical exercises, enhancing the understanding of machine learning concepts.
- Real-world use cases offering insights into how AI and machine learning can be applied to solve industry-specific challenges.

This detailed schedule for Weekend 1 is designed to ensure participants have a strong foundational understanding of AI and its key components, setting the stage for more advanced topics in the following weekends.

Here's a detailed breakdown for Weekend 2 of the bootcamp, focusing on Large Language Models (LLMs) and Generative AI, complemented by a relevant industry use case:

Weekend 02

Exploring Large Language Models and Generative AI

Saturday Session: Generative AI and Large Language Models

Objective: To explore the realm of Generative AI and LLMs, understanding their architecture, capabilities, and the principles behind their operation.

- **Introduction to Generative AI:** Understanding what makes AI 'generative', including an overview of Generative Adversarial Networks (GANs) and their applications.
- **Deep Dive into LLMs:** Exploring the architecture and functionalities of popular LLMs such as GPT-3 and BERT, T5. Understanding how they have transformed various aspects of technology and business.
- **Conversational AI with LaMDA:** Introduction to Google's LaMDA, its unique features in conversational AI, and its practical applications.
- **Interactive Workshop:** Participants engage in a hands-on exercise, like creating basic prompts for GPT-3 or experimenting with simple conversational models.

Use Case: Enhancing customer service with LLMs. A focus on how businesses utilize LLMs to improve customer interaction, automate responses, and personalize communication.

Sunday Session: Customizing LLMs with LangChain and Personal Data

Objective: To provide practical experience in customizing LLMs for specific applications, using tools like LaMDAIndex LangChain and incorporating personal or industry-specific data.

- **LangChain for Advanced Applications:** Introducing LangChain and its use in building complex, chained language model applications.
- **Personalizing LLMs:** Techniques for training and fine-tuning LLMs with specific datasets to meet unique industry needs.
- **Building and Deployment** LLM applications with no code using Flowwise AI , LLMStack, Super Agent.
- **Project Workshop:** Participants start developing their own mini-project, applying LangChain and LLMs to a problem or scenario relevant to their industry.
- **Group Collaboration:** Facilitated group discussions to brainstorm and refine project ideas.

Use Case: Developing a tailored content generation tool for the marketing industry. Exploring how LLMs can be trained to create industry-specific content, understanding nuances, and maintaining brand voice.

Wrap-Up and Q&A

- Recap of the Weekend's key learnings.
- Open floor for questions, allowing participants to clarify concepts and discuss their projects.
- Brief overview of Weekend 3, focusing on practical AI applications in various industries and the Live Hands-On Project.

Weekend 2 - Highlights:

- In-depth exploration of Generative AI and LLMs, showcasing cutting-edge developments in the field.
- Hands-on experience with LLM customization, offering practical skills that participants can apply in their respective fields.
- Focus on real-world use cases, demonstrating the transformative potential of LLMs in enhancing business operations and customer experiences.

This schedule for Weekend 2 aims to deepen participants' understanding of LLMs and their applications, while also providing practical experience in customizing these models for specific business needs.

Here's a detailed breakdown for weekend 3 of the bootcamp, which is dedicated to practical applications and industry-specific use cases, culminating in a Live Hands-On Project.

Weekend 03

Practical Applications and Industry-Specific Use Cases

Saturday Session: Implementing AI in Business and Industry

Objective: To showcase how AI is implemented in various industries, focusing on real-world applications and the integration of AI into existing business processes.

- **Integrating AI into Business Operations:** Strategies for successfully adopting AI in businesses, covering aspects like data strategy, team structure, and technology infrastructure.

Industry-Specific AI Use Cases:

  - **Healthcare:** Using AI for patient data analysis, predictive diagnostics, and personalized treatment plans.

  - **Retail:** Implementing AI for inventory management, customer recommendation systems, and sales forecasting.

- **Interactive Group Activity:** Participants identify challenges in their respective industries and brainstorm how AI can provide solutions.

Use Case: Enhancing personalized healthcare with AI. Examining how AI models are used to predict patient health risks and personalize treatment plans based on individual patient data.

Sunday Session: Live Hands-On Project and AI Implementation Workshop

Objective: To provide a hands-on experience where participants apply their learning to develop an AI solution for a real-world problem in their industry or area of interest.

- **Live Hands-On Project Briefing:** Each participant or group chooses a problem statement for their project, focusing on applying AI to a specific challenge.

- **Project Development Workshop:** Guided session on developing AI projects, covering stages from ideation to deployment. Topics include data collection, model training, evaluation, and implementation strategies.

- **Mentorship and Collaboration:** Instructors and peers provide feedback and suggestions during the project development process.

- **Final Presentations:** Participants present their projects, showcasing their application of AI to solve the chosen problem.

Use Case for Hands-On Project: Developing an AI-driven real estate analysis tool. Participants could choose to create a tool that uses AI to predict real estate market trends, automate property valuations, or provide investment insights.

Wrap-Up and Q&A

- Final recap of the key learnings from the bootcamp.
- Open Q&A session to address any lingering questions or discuss further applications of AI.
- Certificates of Completion are awarded, and participants are encouraged to continue exploring and applying AI in their fields.

Weekend 3 - Highlights:

- Application-focused learning, demonstrating how AI can solve real-world problems in various industries.
- Hands-on capstone project experience, allowing participants to apply their knowledge to a practical challenge.
- Encouragement of creative thinking and problem-solving skills, is essential for successful AI implementation.

W 3 of the bootcamp is designed to solidify participants' understanding of AI through practical application, providing them with the opportunity to apply what they have learned to real-world scenarios. The capstone project serves as a culmination of the bootcamp's learnings, enabling participants to leave with a tangible example of how AI can be implemented in their respective industries

6. Case Studies

Applying Generative AI in Various Industries

1. Healthcare:

Enhancing Patient Care and Medical Research

Use Case: Personalized Treatment Plans

Generative AI is used to analyze vast datasets of patient information, including genetic, lifestyle, and environmental factors. This analysis leads to the development of highly personalized treatment plans. For example, an AI system could identify unique patterns in a patient's data that traditional methods might overlook, offering more effective treatment solutions.

Impact: This approach has led to significant improvements in patient outcomes, particularly in managing chronic diseases and in oncology, where treatments can be more precisely targeted.

2. EdTech:

Customized Learning Experiences

Use Case: Adaptive Learning Platforms

Generative AI algorithms process student performance data to create personalized learning paths. These platforms can generate unique problem sets and learning materials based on a student's strengths and weaknesses. For instance, an AI system might adapt to the difficulty of questions in real-time, ensuring that students are always challenged but not overwhelmed.

Impact: Schools and online education platforms using these AI systems have reported higher engagement rates and improved learning outcomes, as the content is more aligned with each student's learning pace and style.

3. PropTech (Property Technology):

Optimizing Real Estate Investments

Use Case: Predictive Market Analysis

In PropTech, Generative AI is utilized for predictive analysis of real estate markets. AI algorithms can analyze trends in property prices, urban development, and demographic shifts to identify promising investment opportunities. For example, an AI model might predict upcoming hotspots for residential development or commercial real estate.

Impact: Real estate firms leveraging this technology have achieved higher ROI by making data-driven investment decisions, avoiding over-saturated markets, and identifying growth areas before they become widely recognized.

4. Sales and Marketing:

Personalized Customer Experiences

Use Case: AI-Driven Marketing Strategies

Generative AI is deployed to analyze customer data and market trends to develop highly targeted marketing campaigns. This involves generating personalized content, product recommendations, and dynamic pricing strategies. For instance, an e-commerce platform could use AI to create custom email campaigns that resonate with the preferences and past behaviors of each customer.

Impact: Companies using AI in their marketing strategies have seen increased customer engagement, higher conversion rates, and enhanced customer loyalty due to more relevant and personalized marketing efforts.

These case studies illustrate the versatile applications of Generative AI across different sectors, showcasing its potential to revolutionize industries by providing more personalized, efficient, and data-driven solutions.

7. Meet Your Instructor

Arshad Khan

Founder / Chief AI Product Design & Innovation

Arshad, an MIT CSAIL Professional has 20 yrs of AI experience & founded theDevMasters, offering AI courses for all levels. Aims to create an AI community for learning, collaboration, and innovation. He sees AI as a tool & mindset for problem-solving. He also did his Entrepreneurship Specialization at MIT Sloan Business School.

His entrepreneurial spirit and foresight keep his company at the cutting edge, making significant contributions to the evolving landscape of Artificial Intelligence and technology.

Sidy Danioko

Chief Data Scientist

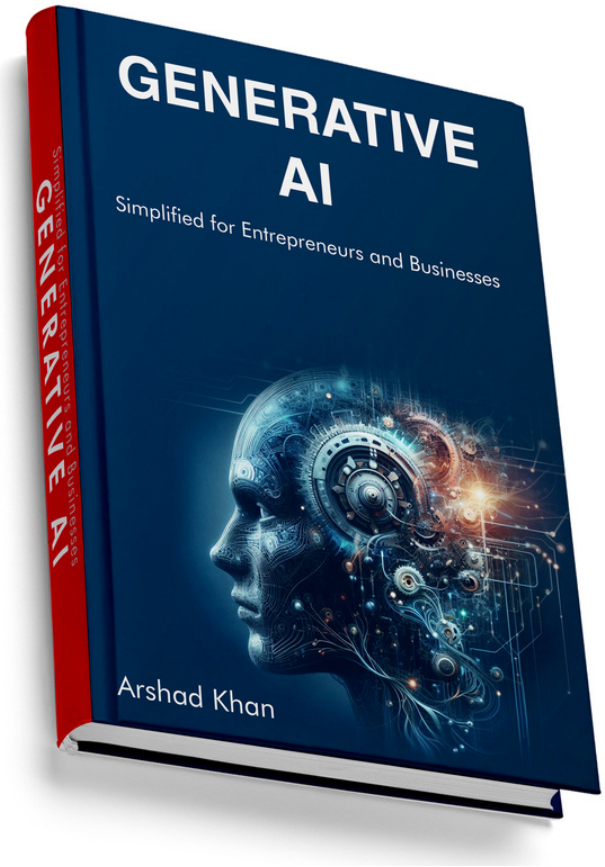
Sidy Danioko is a Senior Data Scientist with theDevMasters. He has three Master's degrees in Computational Physics, Mathematics, & Financial Engineering. This type of drive & passion has gained him countless useful data science related technical skills as well as personal skills. Yet his true happiness & desire is to teach.

8. Next Step

- ***Pay the tuition fee*** through our secure gateway.
- ***Receive a welcome email*** with your login information for the virtual campus.
- ***Gain access to the course content*** prior to the course start date.

Download Your Free Copy of

"Generative AI Simplified for Entrepreneurs and Businesses"



FREE

We are thrilled to announce that all participants attending our upcoming program will receive a complimentary copy of the book **"Generative AI Simplified for Entrepreneurs and Businesses."** This exclusive offering is designed to provide you with valuable insights into the world of generative Artificial Intelligence, tailored specifically for those in the entrepreneurial and business realms.

"Generative AI Simplified for Entrepreneurs and Businessmen" delves into the practical applications of generative AI, breaking down complex concepts into easily understandable components. Authored by Mr. Arshad, the book serves as a comprehensive guide to help you harness the power of AI in your business endeavors.

DOWNLOAD

9. Our Accolades

12+ Years of Experience

10+ Serving Industries

15+ AI experts and Leaders

3 Our Presence in countries

100 % Success Rate