Harvard Business School Online

4 weeks
4-6 hours per week

# AI Essentials for Business

## Syllabus

**AI Essentials for Business** is an immersive online course crafted to empower professionals in guiding their organizations through the dynamic landscape of digital transformation. Participants will delve into vital topics, from crafting digital-first strategies to navigating the ethical complexities inherent in leveraging data and algorithms within your organization.

| Modules | Leaders Interviewed | Takeaways | Key Exercises |
|---|---|---|---|
| **Module 1**<br>**Lesson 1: The Age of AI**<br>**Lesson 2: The AI Factory** | • Dr. Alan Qi, Vice President and AI Chief Scientist, Ant Group<br>• Florian Hillen, CEO, VideaHealth<br>• Dr. Shahid Jabbar, Director of Engineering, VideaHealth | • Explain the concept of an AI-first firm and the characteristics that set it apart from traditional firms.<br>• Understand how AI impacts the business and operating models of companies.<br>• Describe the components of the AI factory: data pipeline, algorithm development, software infrastructure, and experimentation platform.<br>• Distinguish between the three outputs of the AI factory: predictions, pattern recognition, and process automation. | • Identify AI use cases in your organization.<br>• Analyze the business and operating models of your organization and how those align with the AI-first company model.<br>• Sketch the data pipeline of your company, identify data sources, and think about ways datafication can be streamlined. |
| **Module 2**<br>**Lesson 1: The Rise of Generative AI**<br>**Lesson 2: Collision and the AI-First Company** | • Iavor Bojinov, Assistant Professor of Business Administration, Harvard Business School<br>• Stéphane Bancel, CEO, Moderna<br>• Dave Johnson, Vice President, Informatics Data Science and AI, Moderna<br>• Dr. Melissa Moore, Chief Scientific Officer of Platform Research, Moderna<br>• Juan Andres, Chief Technical Operations and Quality Officer, Moderna<br>• Marcello Damiani, Chief Digital and Operation Excellence Officer, Moderna<br>• Victor Bultó, President, Novartis Pharmaceuticals US<br>• Noubar Afeyan, Founder, Flagship Pioneering | • Describe the science behind generative AI and the history of how the field got there.<br>• Differentiate between easy-win and more transformative ways to incorporate generative AI into business processes.<br>• Distinguish between the traditional company approach and the AI-first approach.<br>• Describe the collision of new-generation digital companies with traditional firms, what drives it, and how it impacts digital transformation | • Explore ways generative AI can lower the cost of cognition in your industry.<br>• Consider how generative AI can overcome bottlenecks and achieve cost efficiencies.<br>• Reflect on collisions between traditional and AI-first firms taking place across industries.<br>• **Synthesis Activity - Part 1:**<br>– Propose an AI project for your organization.<br>– Highlight important benefits and considerations. |


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| **Module 3**<br>**Lesson 1: Strategy: Network Effects and Learning Effects**<br><br>**Lesson 2: Ethics of Digital Scale, Scope, and Learning** | • Mitchell Baker, CEO and Chairwoman, Mozilla<br>• Dr. Sangita Reddy, Joint Managing Director, Apollo Hospitals Enterprise Limited India | • Describe three elements of strategy in the age of AI: product value, network value, and data value.<br>• Understand how network and learning effects impact business strategy.<br>• Describe AI ethical considerations: digital amplification, algorithmic bias, cybersecurity, privacy, and inclusiveness.<br>• Discuss mitigating strategies for responsible, ethical AI transformation. | • Analyze your company's strategy across three key pillars: product value, network value, and data value.<br>• Explore how businesses can adopt the platform model.<br>• Identify risks related to digital amplification, algorithmic bias, cybersecurity, privacy, and inclusiveness.<br>• **Synthesis Activity - Part 2:**<br>– Craft a presentation for relevant stakeholders.<br>– Outline how your project will contribute to the digital transformation of your organization. |
| **Module 4**<br>**Lesson 1: Transformation Journey**<br><br>**Lesson 2: Leadership in the Age of AI** | • Dr. Gina Neff, Professor of Technology and Society, Oxford Internet Institute and the Department of Sociology, University of Oxford<br>• Dr. Oren Etzioni, CEO, Allen Institute for AI (AI2)<br>• Victor Bultó, President, Novartis Pharmaceuticals US<br>• Dr. Bitange Ndemo, Professor of Entrepreneurship, University of Nairobi's Business School<br>• Kurt DelBene, Executive Vice President of Corporate Strategy, Core Services Engineering and Operations, Microsoft<br>• Tsedal Neeley, Professor of Business Administration, Harvard Business School<br>• Bratin Saha, Vice President and General Manager of Machine Learning Services, Amazon AI | • Understand digital transformation as a continuum, from a traditional to an AI-first organization.<br>• Discuss the importance of using metrics and frameworks to describe progress toward becoming AI-first.<br>• Explain four major levers driving digital transformation in organizations: strategy, governance, architecture, and culture.<br>• Recognize that AI is transforming organizations across industries and geographies.<br>• Understand the urgency to start your journey with digital transformation and AI today! | • Determine your organization's AI maturity level using the AI-first scorecard.<br>• Reflect on how lessons on strategy, governance, architecture, and culture can be applied in your organization. |

**Learning requirements:** In order to earn a Certificate of Completion, participants must thoughtfully complete Modules 1-4 and exercises therein (including a Synthesis Exercise) by stated deadlines.


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