



MICHIGAN ENGINEERING
PROFESSIONAL EDUCATION
UNIVERSITY OF MICHIGAN

Generative AI Applications for Leaders

In Collaboration With  Microsoft
Azure

#3 Top U.S. Public Schools

#9 In Artificial Intelligence

#11 Best Engineering Schools

U.S. News & World Report, 2025

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simpli|learn



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ABOUT THE PROGRAM

Generative AI is not just a trend – it's a transformational force reshaping how organizations innovate, operate, and grow. With a projected CAGR of 43% over the next decade (Bloomberg Intelligence) and an estimated annual economic impact of \$2.6–\$4.4 trillion (McKinsey), GenAI is redefining business at scale.

To remain competitive, companies need leaders who can understand, evaluate, and guide AI adoption across functions. The Generative AI Applications for Leaders program by Michigan Engineering Professional Education, powered by Simplilearn, empowers experienced professionals to do exactly that - turning AI disruption into strategic advantage.

Designed for senior executives, managers, business leaders, consultants, and technology leaders, this program provides a practical, business-focused approach to AI adoption. Through 55+ hours of live online classes led by industry experts, learners will learn through frameworks and real-world case studies, while getting exposure to cutting edge AI tools. They'll also understand AI applications in workflow automation, sales and marketing, customer service, software engineering, data analytics, and AI economics.

Upon completion, learners will earn a prestigious certificate from Michigan Engineering Professional Education, Simplilearn and Microsoft Azure, affirming their skills to implement AI-driven transformation.

KEY FEATURES



Earn a program completion certificate from Michigan Engineering Professional Education



Secure a Michigan Eng Pro-Ed digital badge, powered by Simplilearn



Access 55+ hours of live, online expert-led sessions with flexible on-demand recordings



Earn a Microsoft course completion certificate hosted on the MS Learn portal



Gain skills in automating workflows, improving efficiency, and leading AI-powered business transformation



Learn through guided practices and demos while working with over 12 modern AI tools, including ChatGPT and Microsoft Copilot



Explore AI strategies tailored for core business functions such as sales, marketing, engineering, analytics, customer service operations, and product R&D



Experience flexible learning with session recordings and 24/7 access to Simplilearn's LMS



Comprehend AI literacy, tech stacks, automation techniques, and ethical AI deployment through a comprehensive GenAI curriculum

MICHIGAN ENGINEERING PROFESSIONAL EDUCATION AND SIMPLILEARN PARTNERSHIP

The University of Michigan is a top-ranked public university, **#3 among Top U.S. Public Schools, #9 in Artificial Intelligence, and #11 in Best Engineering Schools** (U.S. News & World Report, 2025).

Michigan Engineering Professional Education has chosen Simplilearn to power this program through Simplilearn's award-winning immersive learning model.

The program curriculum is vetted by Michigan Engineering Professional Education, although the instructors are not employees of the University of Michigan. In addition to approving program content, Michigan Engineering Professional Education staff provides oversight of this program in relation to instructor assessment process, quality assurance, student satisfaction, and program outcomes.

WHY FUTURE-READY LEADERS MUST EMBRACE GENERATIVE AI?

Generative AI is no longer optional—it's a strategic imperative. For today's leaders, GenAI literacy is essential to fuel innovation, streamline operations, and stay ahead in a competitive landscape.

Leadership today demands hands-on engagement. This means understanding LLMs, exploring real-world use cases, and applying insights to uncover hidden efficiencies and lead confidently in complex environments.

GenAI-savvy leaders don't just adopt— they **redefine their organization's future**. They:

Spot Opportunities: Identify game-changing GenAI use cases

Empower Teams: Drive creative and responsible AI adoption

Make Better Decisions: Weigh AI's strengths and trade-offs

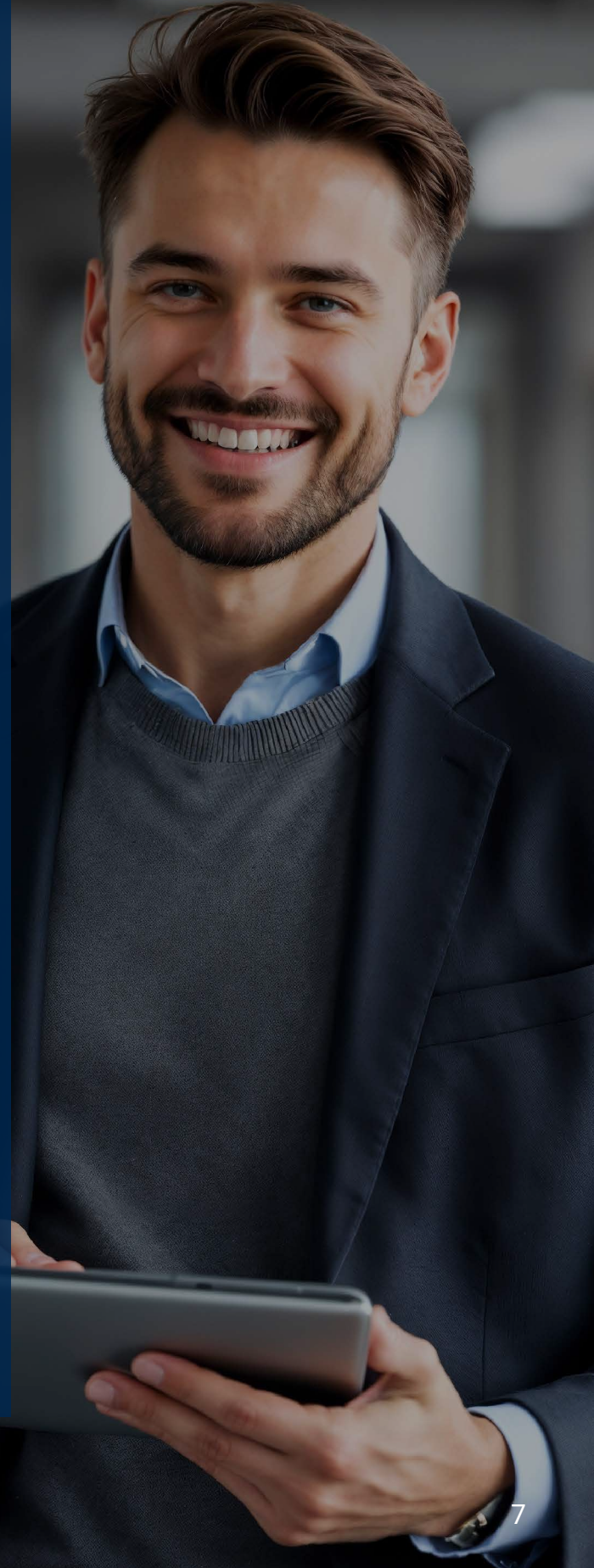
Lead with Integrity: Address ethical concerns head-on



WHO IS THIS PROGRAM FOR?

Ambitious professionals ready to lead AI transformation will find in this program the pathway to move from ideas to impact. The program is suited for:

- **Business Leaders & C-Suite Executives:** Drive AI strategy and long-term growth
- **Senior Managers:** Scale performance through AI
- **Functional Heads:** Lead change in Sales, Marketing, Engineering, Analytics, Customer Service Operations, Product R&D
- **Technology Leaders:** Oversee integration and transformation
- **Consultants & Advisors:** Guide clients through GenAI adoption
- **Entrepreneurs:** Build intelligent and market-disrupting solutions



GENERATIVE AI INDUSTRY TRENDS

Generative AI is disrupting the future of business, offering unprecedented opportunities for efficiency, innovation, and customer engagement. By leveraging GenAI, business leaders can drive automation, enhance decision-making, and unlock new industry revenue streams. From personalized marketing to intelligent automation, GenAI enables companies to stay competitive in an increasingly AI-driven world.

\$2.6T - \$4.4T

Expected annual value added by generative AI to the global economy.

Source: McKinsey & Company

43%

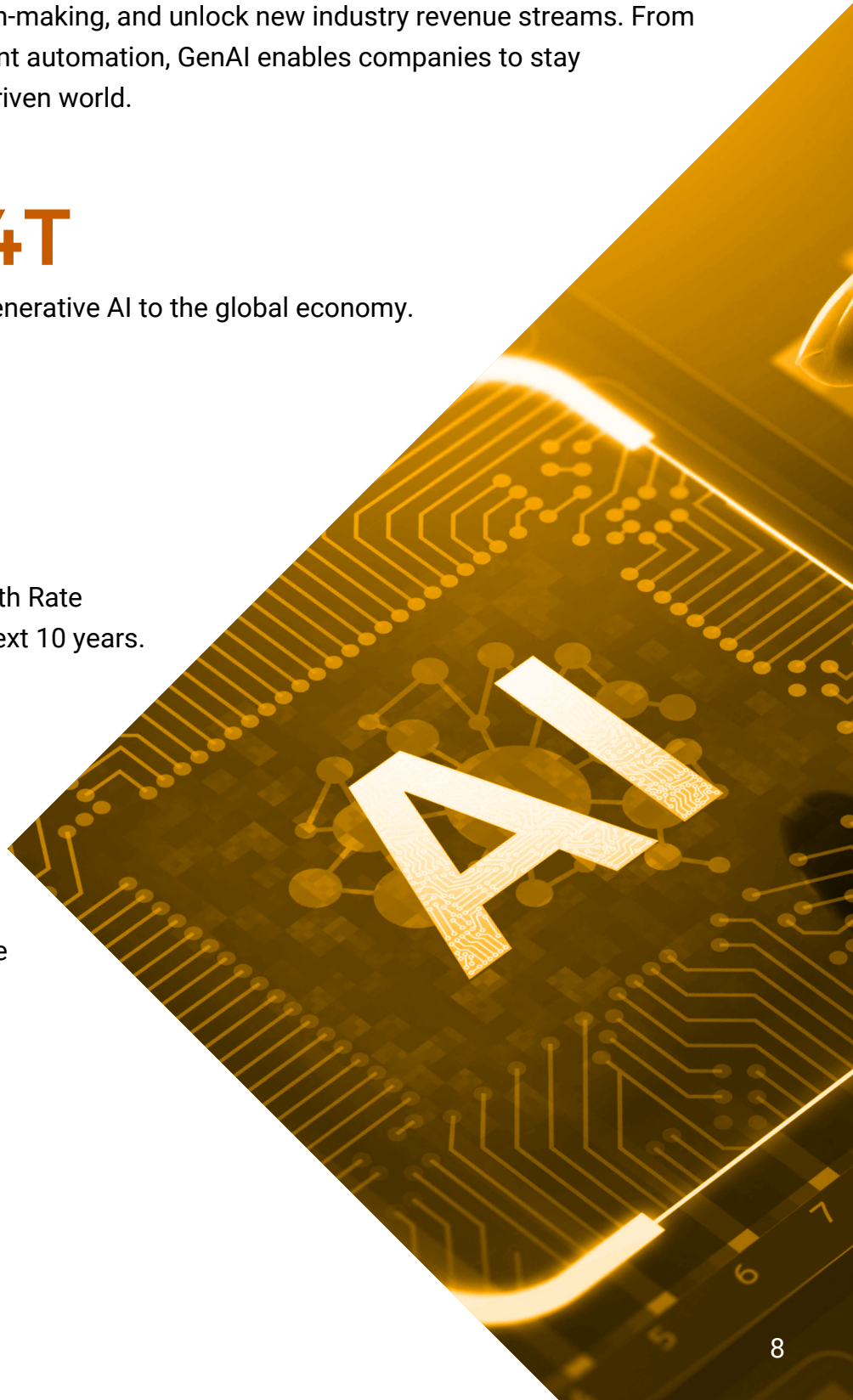
Projected Compound Annual Growth Rate (CAGR) of generative AI over the next 10 years.

Source: Bloomberg Intelligence

\$1.3T

Projected generative AI market size by 2032.

Source: Bloomberg Intelligence

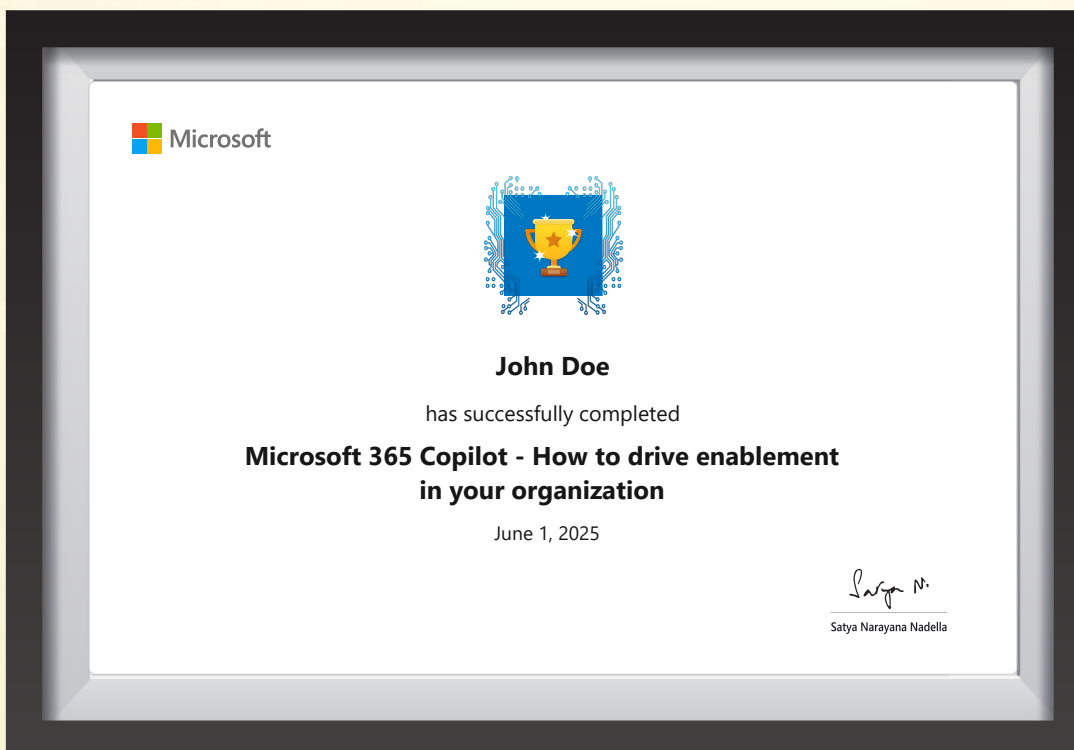


PROGRAM OUTCOMES

- ✓ Adopt AI strategically and integrate it across business functions to enhance decision-making
- ✓ Lead GenAI initiatives that optimize sales, marketing, customer service, and product R&D
- ✓ Drive digital transformation by automating workflows and increasing operational efficiency
- ✓ Leverage AI-powered data analytics to extract actionable insights for smarter decisions
- ✓ Enhance customer engagement through AI-driven personalization with chatbots and virtual assistants
- ✓ Elevate product development with AI for market research, prototyping, and continuous improvement
- ✓ Navigate AI economics and ethics, ensuring compliance, cost efficiency, and ROI
- ✓ Implement Microsoft Copilot to streamline sales, HR, IT, finance, and operational functions



CERTIFICATES AND DIGITAL BADGE



LEARNING PATH VISUALIZATION

Core Courses



Electives

- Masterclass: Agentic AI for Product Innovation & Enterprise Automation
- Microsoft 365 Copilot - How to Drive Enablement in Your Organization

TOOLS COVERED



ChatGPT



Hugging Face



Google
Cloud Platform



Figma



Julius



Microsoft
Copilot



OpenArt



invideo

Microsoft
PowerApps



ElevenLabs



Visual Studio Code

MOSTLY·AI



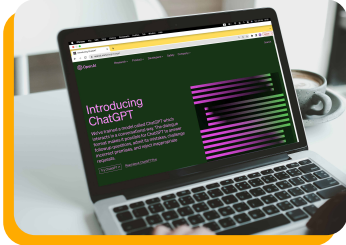
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SKILLS COVERED

- ✓ Scaling AI Initiatives
- ✓ Conversational AI
- ✓ Chatbot Implementation
- ✓ AI Economics
- ✓ ROI Analysis
- ✓ Ethical AI & Compliance
- ✓ Model Evaluation & Optimization
- ✓ LLMOps & AI Deployment
- ✓ Predictive Analytics
- ✓ Sentiment Analysis
- ✓ Scenario Simulation
- ✓ AI Risk Assessment
- ✓ Workflow Automation



INDUSTRY PROJECTS



ChatGPT-Based Storytelling

Create an interactive storytelling adventure using ChatGPT, where you can create unique and engaging narratives without requiring any coding or additional platforms.



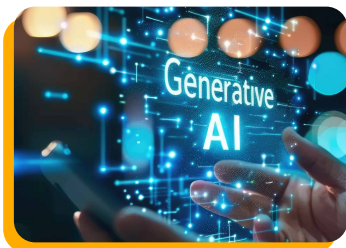
Leveraging GenAI for Business Insights and Decision-Making

Showcase GenAI's power by analyzing data with ChatGPT, answering business questions and gaining insights into setting up and managing GenAI tech stack layers.



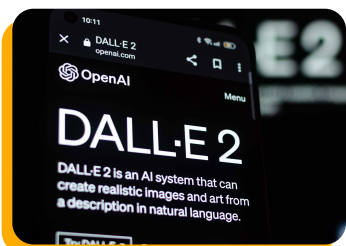
Automating Blog Creation and Email Notifications Using Zapier

Create an automated workflow for blog generation and stakeholder emails using Zapier, enhancing your ability to integrate tools for seamless content and communication.



Managing Brand Consistency With Generative AI

Develop a strategy to ensure brand consistency with GenAI, defining voice, tone, and style, creating AI-driven content, and setting a review process for alignment.



Creating an AI-Driven Content Campaign

Create an AI-powered social media campaign using ChatGPT and DALL-E to promote an eco-friendly product, run A/B tests, and gain insights for content optimization.



Implementing and Managing a GenAI-Powered Customer Support Agent

Build, test, and optimize a GenAI-powered support agent with Eleven Labs, ensuring compliance, refining performance, and enhancing reliability through detailed testing.



Integrating LeadSuccessBot With the FairJob Platform

Define and deploy LeadSuccessBot to enhance user engagement on a job-matching platform, showcasing the impact of AI-powered chatbots in business environments.



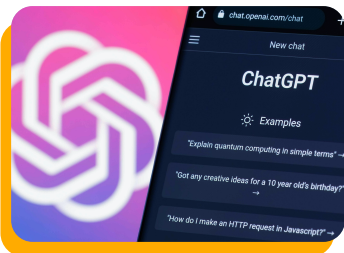
Enhancing Data Analytics Processes With Generative AI

Design a strategy to integrate GenAI into data analytics, enhancing efficiency, accuracy, and decision-making while exploring ChatGPT's applications and best practices.



Driving Business Innovation With Generative AI in Data Analytics

Tackle a real-world business scenario with GenAI to optimize data workflows, uncover insights, and craft effective solutions while enhancing creativity and problem-solving.



Managing the Fit Smart Product Lifecycle With ChatGPT

Manage Fit Smart's lifecycle with ChatGPT, streamlining research, development, launch, and retirement while enhancing efficiency, generating insights, and solving challenges.



Automating Feature Scaling Decisions With Generative AI

Automate feature scaling with GenAI tools like ChatGPT and Copilot and analyze engagement metrics and regional trends to overcome delays and inefficiencies in product growth.



Enhancing Product Launches With AI-Powered Microsoft Edge Copilot

Use Copilot to plan and execute an e-bike launch, generating presentation-ready documents to streamline processes and guide operational teams effectively.



ELIGIBILITY CRITERIA

For admission to this GenAI Applications for Leaders program, candidates should have:

- ✓ A minimum of 5 years of work experience (preferred but not mandatory)
- ✓ An understanding of AI's growing influence
- ✓ An eagerness to leverage GenAI to solve real business problems

APPLICATION PROCESS

The application process consists of three simple steps:



Submit an Application

Complete the application by providing the essential details about yourself.



Reserve Your Seat

Secure your seat by completing the program fee payment.



Start Learning

Begin your learning journey on the designated cohort start date.

TALK TO AN ADMISSIONS COUNSELOR

We have a team of dedicated admissions counselors to guide you in the application process and related matters. They are available to:

- ✓ Answer your questions about the application process.
- ✓ Discuss your financing options and assist with financial aid (if required).
- ✓ Provide insight into the curriculum, program outcomes, and more.

[Inquire Now](#)

[Contact Us | 1-800-212-7688](#)

AI Literacy for Business Leaders

This course introduces foundational concepts in artificial intelligence (AI), machine learning (ML), and generative AI. It equips business leaders with essential knowledge to make informed decisions in AI-centric environments.

Learning Outcomes

- Develop a foundational understanding of AI, ML, and generative AI to support strategic decision-making
- Distinguish between AI and generative AI to uncover strategic opportunities
- Explore ML techniques, including supervised, unsupervised, and reinforcement learning
- Understand how neural networks, GANs, transformers, and LLMs power modern AI systems
- Assess the business value of intelligent chatbot development
- Learn how temperature settings and sampling techniques influence AI outputs

Topics Covered

- ✓ Introduction to AI and ML
- ✓ Fundamentals of Generative AI
- ✓ AI vs. Generative AI
- ✓ Supervised, Unsupervised, and Reinforcement Learning
- ✓ Neural Networks and Deep Learning
- ✓ Large Language Models (LLMs)
- ✓ Intelligent Chatbots and Their Business Applications
- ✓ AI Output: Temperature Settings & Sampling Techniques

Generative AI Tech Stack

Building on the AI literacy foundation, this course explores the technologies and infrastructure necessary for building and scaling generative AI solutions. It allows learners to apply the GenAI tech stack in real world scenarios.

Learning Outcomes

- Understand the components of generative AI infrastructure and their business implications
- Compare foundational models to identify suitable applications
- Analyze AI models based on scalability, cost, and flexibility
- Use modern AI development tools to create scalable solutions
- Differentiate between fine-tuning and RAGs to strike the right balance in cost and performance
- Leverage cloud computing for scaling generative AI initiatives

Topics Covered

- ✔ Generative AI Infrastructure
- ✔ Foundation Models and Applications
- ✔ Open-Source vs. Proprietary Models
- ✔ LLMOps for AI Deployment
- ✔ AI Development Tools
- ✔ Fine-Tuning vs. RAGs
- ✔ Cloud and Compute Resources
- ✔ End-to-End Generative AI Solution Design

3 Workflow Automation

This course focuses on automating business processes, demonstrating how AI-powered tools streamline workflows and improve efficiency.

Learning Outcomes

- Understand the principles of workflow automation and its efficiency benefits
- Build automation using Zapier with triggers and Zaps
- Integrate OpenAI's API into automation tools for smart task execution
- Construct and troubleshoot automated workflows for content, email, and social media
- Apply advanced automation techniques, including conditional logic and multistep Zaps
- Track and enhance the performance of AI-powered workflows for scalability

Topics Covered

- ✓ Workflow Automation Basics
- ✓ Zapier Fundamentals
- ✓ OpenAI API Integration
- ✓ Building & Debugging Workflows
- ✓ Advanced Automation Techniques
- ✓ Scaling AI-Powered Automation

Generative AI Use Cases: Sales & Marketing

This course explores how generative AI enhances sales and marketing operations through practical use cases and strategic implementation.

Learning Outcomes

- Implement AI strategies to boost sales and marketing effectiveness
- Use AI for targeted lead generation, segmentation, and personalized campaigns
- Enhance sales forecasting and customer retention with predictive analytics
- Automate content creation using AI-generated media
- Improve engagement via AI-driven chatbots and assistants
- Examine real-world AI use in marketing and sales
- Overcome challenges such as brand alignment, data privacy, and operational hurdles

Topics Covered

- ✓ AI in Sales & Marketing
- ✓ AI-Powered Lead Generation
- ✓ AI-Generated Content
- ✓ Conversational AI
- ✓ Case Studies
- ✓ Implementation Challenges
- ✓ Predictive Analytics: Forecasting, Pipelines, and Retention

Generative AI Use Cases: Customer Service Operations

This course highlights how generative AI improves customer service by enabling efficient, scalable, and personalized interactions.

Learning Outcomes

- Evaluate how GenAI enhances customer service responsiveness and personalization
- Deploy AI chatbots and assistants for automated support
- Automate issue resolution and generate contextual responses
- Utilize sentiment analysis for deeper customer insight
- Learn from AI case studies in customer service and outage management
- Tackle privacy, quality control, and AI-human interaction balance

Topics Covered

- ✓ AI in Customer Service
- ✓ Personalized AI Interactions
- ✓ Automated Problem Resolution
- ✓ Sentiment Analysis & Insights
- ✓ Case Studies
- ✓ Implementation Challenges

Generative AI Use Cases: Software Engineering

This course examines how GenAI supports software development through automation and enhancement of development workflows.

Learning Outcomes

- Use AI tools to automate code writing, translation, and completion
- Implement AI for test generation, code reviews, and security assessments
- Generate and refine documentation using AI
- Improve code clarity and efficiency via AI-based refactoring
- Apply AI to design accessible, intuitive UI/UX experiences
- Integrate AI in development tools, IDEs, and prototyping workflows
- Stay ahead of trends in AI-powered and no-code software development

Topics Covered

- ✓ AI in Software Development
- ✓ AI-Powered Code Generation
- ✓ Automated Testing & Security
- ✓ AI-Generated Documentation
- ✓ Code Optimization & Refactoring
- ✓ AI in UX/UI Design
- ✓ AI-Integrated Development Tools
- ✓ Future Trends

```
...redirected...  
...}) {  
...mp')  
...submitted  
...REQUEST_METHOD'] =  
...database  
...PDO('mysql:host=localhost;  
...retrieve user record from database  
...$stmt = $db->prepare('SELECT * FROM  
...$stmt->bindParam(':email', $_POST  
...$stmt->execute());  
...$user = $stmt->fetch(PDO::FETCH_  
...  
//Verify password  
if($user && password_verify($_POST  
...  
// Set session variables and redirect  
$_SESSION['user_id'] = $user['id'];  
$_SESSION['user_name'] = $user['  
header('Location: index.php');  
exit;  
} else {  
...  
// Display error message  
$error = 'Invalid email or password'
```

Generative AI Use Cases: Data Analytics

This course focuses on how GenAI can transform data analytics by enhancing interpretation, visualization, and predictive capabilities.

Learning Outcomes

- Apply GenAI to uncover patterns and generate hypotheses
- Identify anomalies and detect outliers through AI models
- Create engaging visualizations to support decision making
- Build predictive models to forecast trends
- Simulate risk and opportunity scenarios
- Study real-world data analytics transformations using GenAI
- Navigate constraints such as compute costs, synthetic data, and model reliability

Topics Covered

- ✓ AI in Data Analytics
- ✓ AI-Powered Data Exploration
- ✓ Anomaly & Outlier Detection
- ✓ AI-Driven Predictive Modeling
- ✓ Scenario Simulation
- ✓ Case Studies
- ✓ Challenges & Ethics



Generative AI Use Cases: Product Research & Development

This course explores GenAI's role in accelerating R&D by enhancing product design, research, and testing processes.

Learning Outcomes

- Conduct market research and ideation with AI tools
- Predict evolving customer needs and map their journeys
- Develop virtual prototypes and variants for rapid testing
- Execute AI-driven SWOT and risk analysis for informed decisions
- Enhance UX with predictive AI features
- Leverage data for real-time product monitoring and feature development
- Address concerns related to ethics, privacy, and brand alignment

Topics Covered

- ✓ AI in Product Development
- ✓ Automated Market Research
- ✓ Customer Journey Mapping
- ✓ AI-Driven Prototyping
- ✓ Strategic Analysis & Risk Assessment
- ✓ AI-Powered UX Optimization
- ✓ Data-Driven Product Management
- ✓ Ethical & Brand Considerations

Ethics and Economics of Generative AI

This course presents a comprehensive overview of the economic and ethical considerations in AI adoption, focusing on cost efficiency and responsible implementation.

Learning Outcomes

- Assess the total cost of ongoing or upcoming AI projects
- Compare AI-driven and manual workflows for ROI analysis
- Calculate return on AI investment and make informed trade-offs
- Identify risks around fairness, accountability, and bias in AI
- Manage data privacy and ensure regulatory compliance
- Explore global trends and regulatory efforts shaping ethical AI deployment

Topics Covered

- ✓ Initial AI Costs
- ✓ Ongoing AI Costs
- ✓ Unit Economics
- ✓ AI ROI and Trade-Offs in AI Projects
- ✓ Ethical Challenges in AI Decision-Making
- ✓ Data Privacy
- ✓ Future Directions: AI Ethics With Governments and Stakeholders



AI
ETHICS

Microsoft Copilot for Business

This course focuses on integrating Microsoft Copilot into business functions to enhance productivity and streamline departmental operations.

Learning Outcomes

- Utilize Microsoft Copilot across operational functions
- Accelerate sales with customized AI-generated proposals
- Enhance IT functions through AI-guided troubleshooting and insights
- Generate marketing reports and strategic plans with AI assistance
- Streamline finance tasks like budgeting and reporting using Copilot
- Optimize HR operations through AI-driven processes
- Build effective dashboards to oversee operations and inventory
- Follow integration best practices for maximizing Copilot adoption

Topics Covered

- ✓ Overview and Features of Microsoft Copilot
- ✓ Using Copilot for Sales Optimization
- ✓ Using Copilot for IT Security
- ✓ Using Copilot for Web Browsing
- ✓ Using Copilot for Marketing Insights
- ✓ Using Copilot for Financial Planning
- ✓ Integrating Best Practices



Elective Courses

Masterclass: Agentic AI for Product Innovation & Enterprise Automation

This masterclass explores the core foundations of Agentic AI—planning, memory, tool integration, and multi-agent orchestration—before diving into real-world product use cases and enterprise deployment models. Learners will engage in hands-on walkthroughs using LangChain, Lovable, and CrewAI, and wrap up with strategic insights on roadmaps, go-to-market plans, and team capability frameworks.

Microsoft 365 Copilot - How to Drive Enablement in Your Organization

A Microsoft course designed to equip professionals with the skills for user enablement and AI adoption using the Microsoft 365 Copilot framework. It's structured into four key phases: Get Ready, Onboard & Engage, Deliver Impact, and Extend & Optimize.



Corporate Training



Features of Corporate Training



Tailored learning solutions



Flexible pricing options



Enterprise-grade learning management system (LMS)



Enterprise dashboards for individuals and teams



24x7 learner assistance and support



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