Artificial Intelligence (AI) Courses, Learning Paths, and Cert Prep (Beginner to Advanced Courses)

LinkedIn Learning empowers L&D and tech leaders to help employees across departments build AI skills they need to excel in the new world of work with **actionable content** covering the **timeliest topics** and taught by **trusted industry experts**.

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CompTIA anticipates 97 million specialists will be needed in the AI industry by 2025.

LinkedIn Learning

Artificial Intelligence (AI) Mapping
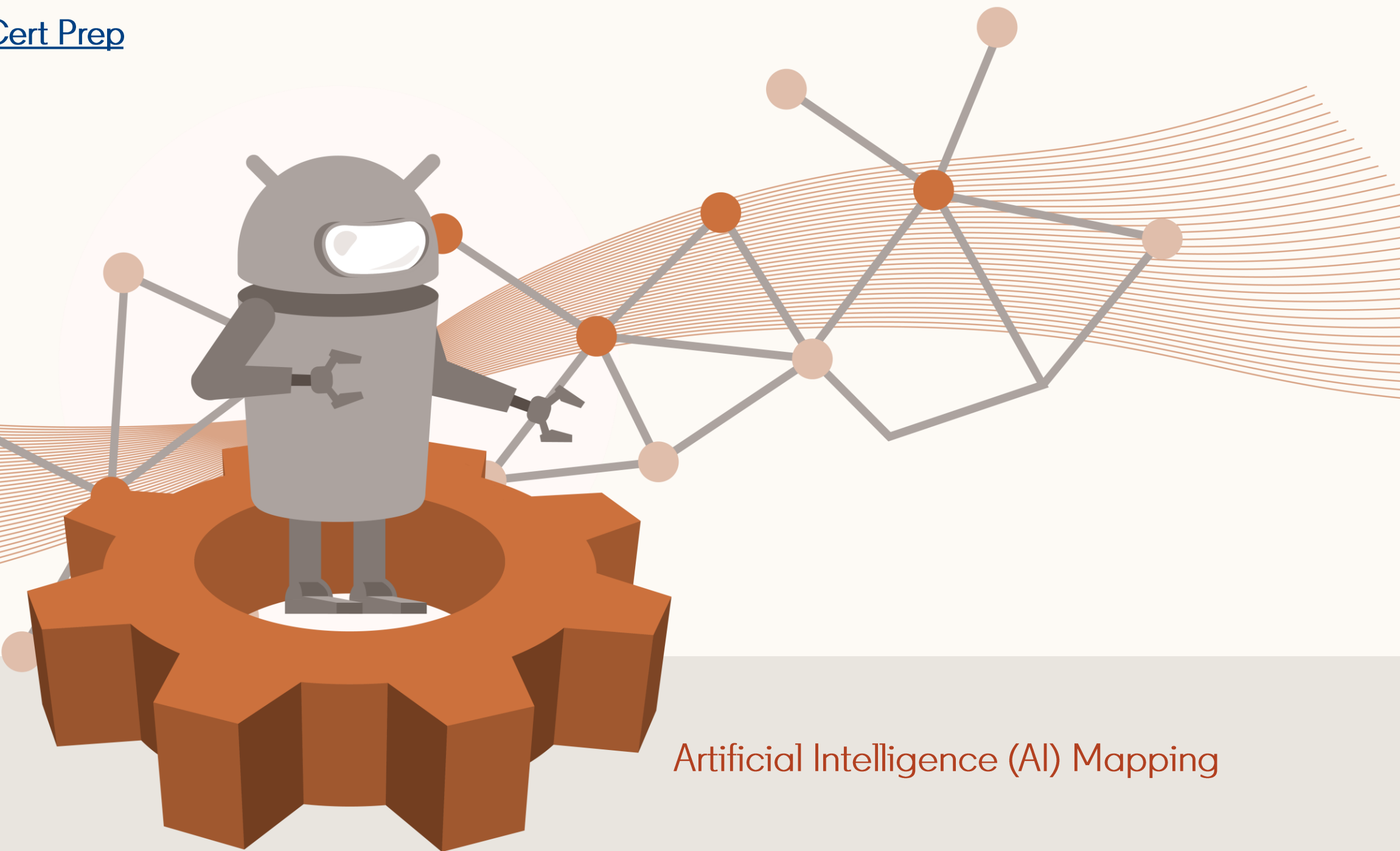
Artificial Intelligence (AI) – New Courses and Learning Path Releases

"Our courses are designed to help you learn new skills that can boost your productivity and accelerate your career growth." —Tomer Cohen, Chief Product Officer at LinkedIn

What Is Generative AI?

Author: Pinar Seyhan Demirdag

Overview: Learn about the basics of generative A.I., including its history, popular models, how it works, ethical implications, and much more.

Generative AI for Business Leaders

Author: Tomer Cohen

Overview: Learn about the key issues and implications that global business leaders need to consider about generative artificial intelligence as they lead their companies into the future.

Introduction to Conversational AI

Author: Ian Barkin

Overview: Get a comprehensive overview of the history, uses, tools, and benefits of one of the hottest fields in technology: conversational AI.

How to Research and Write Using Generative AI Tools

Author: Ian Barkin

Overview: Learn how to write effective prompts with ChatGPT and other AI chatbots to upskill as a researcher and professional writer.

Nano Tips for Using Generative AI Tools for Better Marketing Outcomes with Joanna Yung*

Author: Joanna Yung

Overview: Get quick, bite-sized tips on using AI to revolutionize your marketing. Each video is less than two minutes long, so you can make learning fit into even your busiest days.

Introduction to Prompt Engineering for Generative AI

Author: Ronnie Sheer

Overview: Start exploring large language models in the modern NLP landscape and get hands-on practice using no-code or low-code interfaces to test out these technologies.

Tech Trends

Authors: David Gassner, Scott Simpson, Walt Ritscher, Morten Rand-Hendriksen, Ray Villalobos

Overview: Gain clear perspectives on which up-and-coming technologies you should consider adopting and why.

Learning Path: Responsible AI Foundations

Authors: Martin Kemka, Ayodele Odubela, Brandie Nonnecke, PHD, Jill Finlayson, Tsu-Jae Liu

Overview: Responsible AI principles are key as AI integrates into more industries and interacts more with the public. This learning path underscores the core principles of responsible AI, frameworks to apply them practically in an enterprise organization, and tools for building fairness into AI models.

Learning Path: Advance Your Skills in Natural Language Processing

Authors: Jonathan Fernandes, Derek Jedamski, Kumaran Ponnambalam

Overview: Natural language processing is quickly emerging as a key skill for machine learning engineers. This advanced-level learning path provides machine learning engineers with advanced NLP techniques and tools to further their knowledge in this industry-defining field.

Artificial Intelligence (AI) Mapping

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Machine Learning [(topic page)](#)

Equip your organization to make more informed decisions with the help of machine learning methods. Machine learning handles repetitive organizational tasks so employees can focus on creative solutions, complex problem-solving, and impactful work.

Self-Supervised Machine Learning

Author: Janani Ravi

Overview: Learn how self-supervised models can help take advantage of unlabeled data and use self-supervised models in transfer learning.

Transitioning into Machine Learning Engineering

Author: Khaulat Ayomide Abdulhakeem

Overview: Develop skills to transition from data science or software development into a new career in machine learning engineering.

Applied Machine Learning: Ensemble Learning

Author: Derek S Jedamski

Overview: Explore how to make powerful, accurate predictions with ensemble learners, one of the most common classes of machine learning algorithms.

Machine Learning Foundations: Linear Algebra

Author: Terezija Semenski

Overview: Explore the fundamentals of linear algebra, the mathematical foundation of machine learning algorithms.

Machine Learning with Data Reduction in Excel, R, and Power BI

Author: Helen Wall

Overview: Explore data reduction techniques from machine learning and how to integrate your methods in Excel, R, and Power BI.

Machine Learning with Python: Foundations

Author: Fred Nwanganga

Overview: Learn the basics of machine learning and how you can create a machine learning model with Python.

Machine Learning and AI Foundations: Advanced Decision Trees with KNIME

Author: Keith McCormick

Overview: Learn to go beyond the basic decision tree algorithms in KNIME by accessing WEKA, R, and Python-based decision tree and rule induction algorithms from within the KNIME platform.

Machine Learning with Python: Association Rules

Author: Fred Nwanganga

Overview: Get an introduction to logistic regression by exploring how to build supervised machine learning models with Python.

Machine Learning with Python: Logistic Regression

Author: Fred Nwanganga

Overview: Start exploring large language models in the modern NLP landscape and get hands-on practice using no-code or low-code interfaces to test out these technologies.

Machine Learning with Python: k-Means Clustering

Author: Fred Nwanganga

Overview: Learn the basics of k-means clustering, one of the most popular unsupervised machine learning approaches.

Machine Learning with Python: Decision Trees

Author: Fred Nwanganga

Overview: Learn how to build decision trees in Python to measure impurity within a partition and improve outcomes on machine learning projects.

Machine Learning and AI Foundations: Prediction, Causation, and Statistical Inference

Author: Keith McCormick

Overview: Gain insights to help improve your machine learning models and statistical analyses.

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Generative AI [(topic page)](#)

Embrace the generative AI era by upskilling your workforce! Learn about the basics of generative AI, including its history, popular models, how it works, ethical implications, and much more.

Generative AI for Business Leaders

Author: Tomer Cohen

Overview: Learn about the key issues and implications that global business leaders need to consider about generative artificial intelligence as they lead their companies into the future.

What Is Generative AI?

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Introduction to Conversational AI

Author: Ian Barkin

Overview: Get a comprehensive overview of the history, uses, tools, and benefits of one of the hottest fields in technology: conversational AI.

Prompt Engineering: How to Talk to the AIs

Author: Xavier Amatriain

Overview: Develop your AI skills by learning to design and fine-tune prompts that interact directly with large language models.

Building Skills with Semantic Kernel

Author: John Maeda

Overview: Level up your skills with Semantic Kernel, the new face of AI-powered development that helps integrate LLM AI capabilities into applications.

Pair Programming with AI

Author: Morten Rand-Hendriksen

Overview: Learn practical strategies and get hands-on practice on how to leverage AI tools to increase productivity and write better code.

Nano Tips for Using ChatGPT for Business with Rachel Woods

Author: Rachel Woods

Overview: Get quick, bite-sized tips on leveraging ChatGPT for business. Each video is less than two minutes long, so you can make learning fit into even your busiest days.

Nano Tips for Using Generative AI Tools for Better Marketing Outcomes with Joanna Yung

Author: Joanna Yung

Overview: Get quick, bite-sized tips on using AI to revolutionize your marketing. Each video is less than two minutes long, so you can make learning fit into even your busiest days.

Transformers: Text Classification for NLP Using BERT

Author: Jonathan Fernandes

Overview: Learn about transformers, the go-to architecture for NLP and computer vision tasks.

GPT-4: The New GPT Release and What You Need to Know

Author: Jonathan Fernandes

Overview: Get a sneak peek at GPT-4, the latest version of the popular AI software that interacts with large language models and generates content as natural text or code.

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Responsible AI (Ethics) [(topic page)](#)

Empower employees to learn responsible AI principles and their practical applications. Practice designing, developing, and deploying responsible AI with ethical intentions—allowing your team to engender trust and confidently scale new AI initiatives.

AI Show: Deep Dive into Responsible AI Dashboard and Scorecard

Author: Seth Juarez, Microsoft Learn Licensor

Overview: Learn about the responsible AI dashboard. Find out how to use Azure machine learning responsibly by looking at Microsoft's responsible AI toolbox.

AI Accountability Essential Training

Author: Barton Poulson

Overview: Learn why it's absolutely crucial for AI-related data science work to be transparent, explainable, accountable, and ethical in its design and execution.

Responsible AI: Principles and Practical Applications

Author: Jill Finlayson, Brandie Nonnecke, Tsu-Jae Liu

Overview: Learn how AI is being used today and how to ensure its responsible usage into the future.

Foundations of Responsible AI

Author: Ayodele Odubela

Overview: Learn about the practices needed to perform fairness testing and implement responsible AI systems.

Tech On the Go: Ethics in AI

Author: Ayodele Odubela

Overview: Learn about the fundamentals of ethics in AI. Explore ways to operationalize responsible AI in daily organizational practice.

Introduction to Responsible AI Algorithm Design

Author: Martin Kemka

Overview: Walk through the steps involved in designing responsible AI and to making responsible decisions. Along the way, check your learning with included challenge and solution sets.

Ethics in the Age of Generative AI

Author: Vilas Dhar

Overview: Learn why ethical considerations are a critical part of the generative AI creation and deployment process and explore ways to address these ethical challenges.

Artificial Intelligence (AI) Mapping
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Natural Language Processing (topic page)

NLP technology continues to evolve and develop for new uses. Stay ahead with these LinkedIn Learning courses.

Natural Language Processing with PyTorch

Author: Zhongyu Pan

Overview: Learn the basics of using PyTorch, a powerful deep learning tool for natural language processing.

Deep Learning Foundations: Natural Language Processing with TensorFlow

Author: Harshit Tyagi

Overview: Learn foundational deep learning techniques to classify, predict, and generate text using different neural networks.

Advanced AI: Transformers for NLP Using Large Language Models

Author: Jonathan Fernandes

Overview: Explore a user-friendly approach to working with transformers and large language models for natural language processing.

Top 10 Skills for Computational Linguistics

Author: Free the Data Academy licensor, Ben Sullins

Overview: Learn the top ten skills of computational linguists to build out your professional toolbox and boost your career.

Hands-On Natural Language Processing

Author: Wuraola Oyewusi

Overview: Learn to use natural language processing to make sense of text data and derive useful insights.

Neural Networks (topic page)

Neural networks are robust tools used to solve complex business problems. Learn about neutral networks, automate work processes, identify patterns, and predict rare events like fraud detection.

Introduction to Attention-Based Neural Networks

Author: Janani Ravi

Overview: Learn what attention-based models are, how they work, and what they can do for recurrent neural networks..

Training Neural Networks in Python

Author: Eduardo Corpeño

Overview: Take a deep dive into the inner workings of neural networks by learning how to create one from scratch in Python.
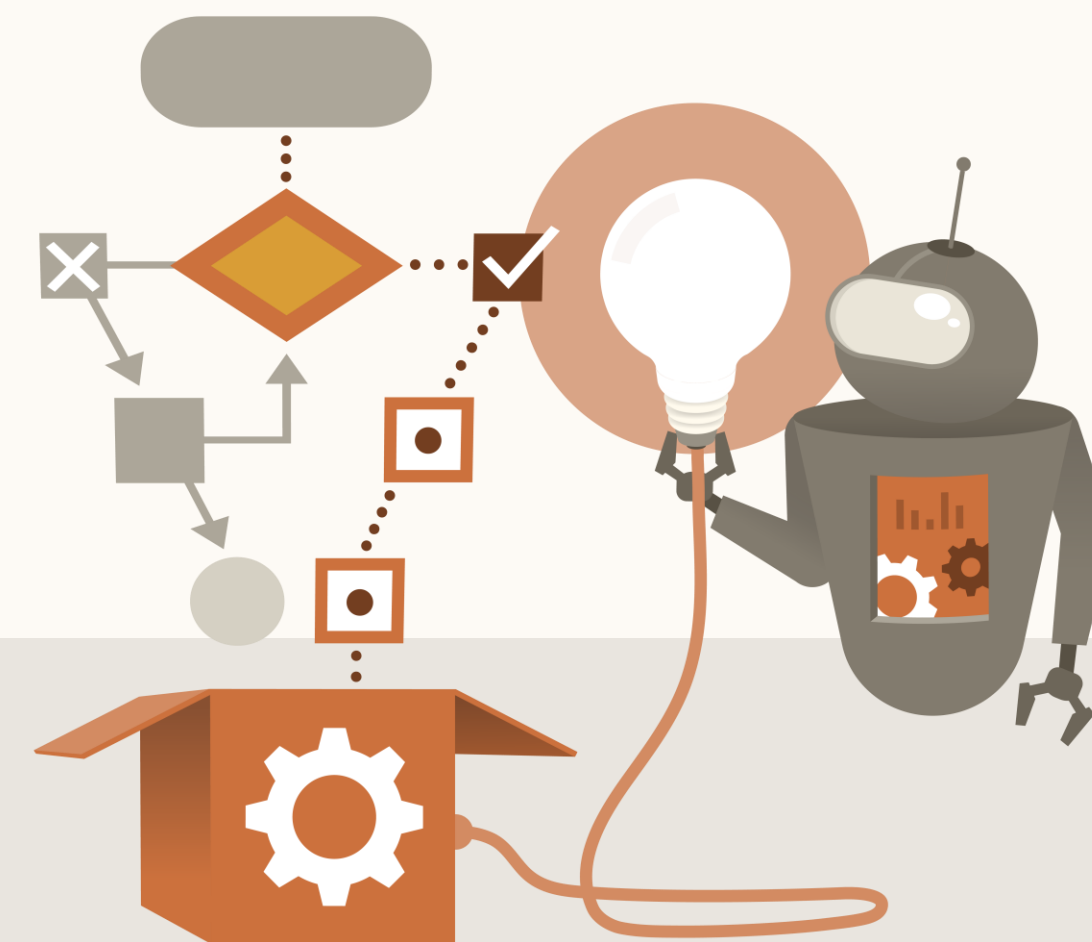
Recurrent Neural Networks

Author: Kumaran Ponnambalam

Overview: Learn the basics of recurrent neural networks to get up and running with RNN quickly.

Training Neural Networks in C++

Author: Eduardo Corpeño

Overview: Are you interested in neural networks or machine learning? Learn about the components of a neural network, as well as how to build and train one in C++.

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Machine Learning Operations (MLOps) (topic page)

MLOps is the intersection of people, processes, and operations for gaining business value from machine learning. It streamlines machine learning model development, deployment, validation, and governance. Learn how to accelerate ML workflows' automation, collaboration, and reliability.

Essentials of MLOps with Azure: 1 Introduction

Author: Noah Gift

Overview: Learn about the foundations of MLOps, plus how to use Spark for MLOps and some basic things you should know to be successful in using it.

Essentials of MLOps with Azure: 2 Databricks MLflow and MLflow Tracking

Author: Noah Gift

Overview: Learn about the basics of tracking, get into the details of why you need to track your models in production, and do some telemetry.

Essentials of MLOps with Azure: 3 Spark MLflow Projects on Databricks

Author: Noah Gift

Overview: Explore exciting things you can do with MLflow projects, from the perspective of both Databricks and Azure.

Essentials of MLOps with Azure: 4 Spark MLflow Models and Model Registry

Author: Noah Gift

Overview: Learn how easy it is to create MLflow models, on platform or off platform, in places like GitHub Codespaces.

MLOps Essentials: Model Deployment and Monitoring

Author: Kumaran Ponnambalam

Overview: Learn how to successfully deploy and monitor MLOps models to deliver scalable and reliable ML products and services.

MLOps Essentials: Model Development and Integration

Author: Kumaran Ponnambalam

Overview: Get started with MLOps Concepts for Model Development and Integration, to organize machine learning (ML) development and deliver scalable and reliable ML products.

AI Show: MLOps (v2) - Unifying MLOps at Microsoft

Author: Microsoft Learn licensor, Seth Juarez

Overview: Learn how to approach MLOps as a process of organization. Explore how to train, package, validate, deploy, and monitor your machine learning model.
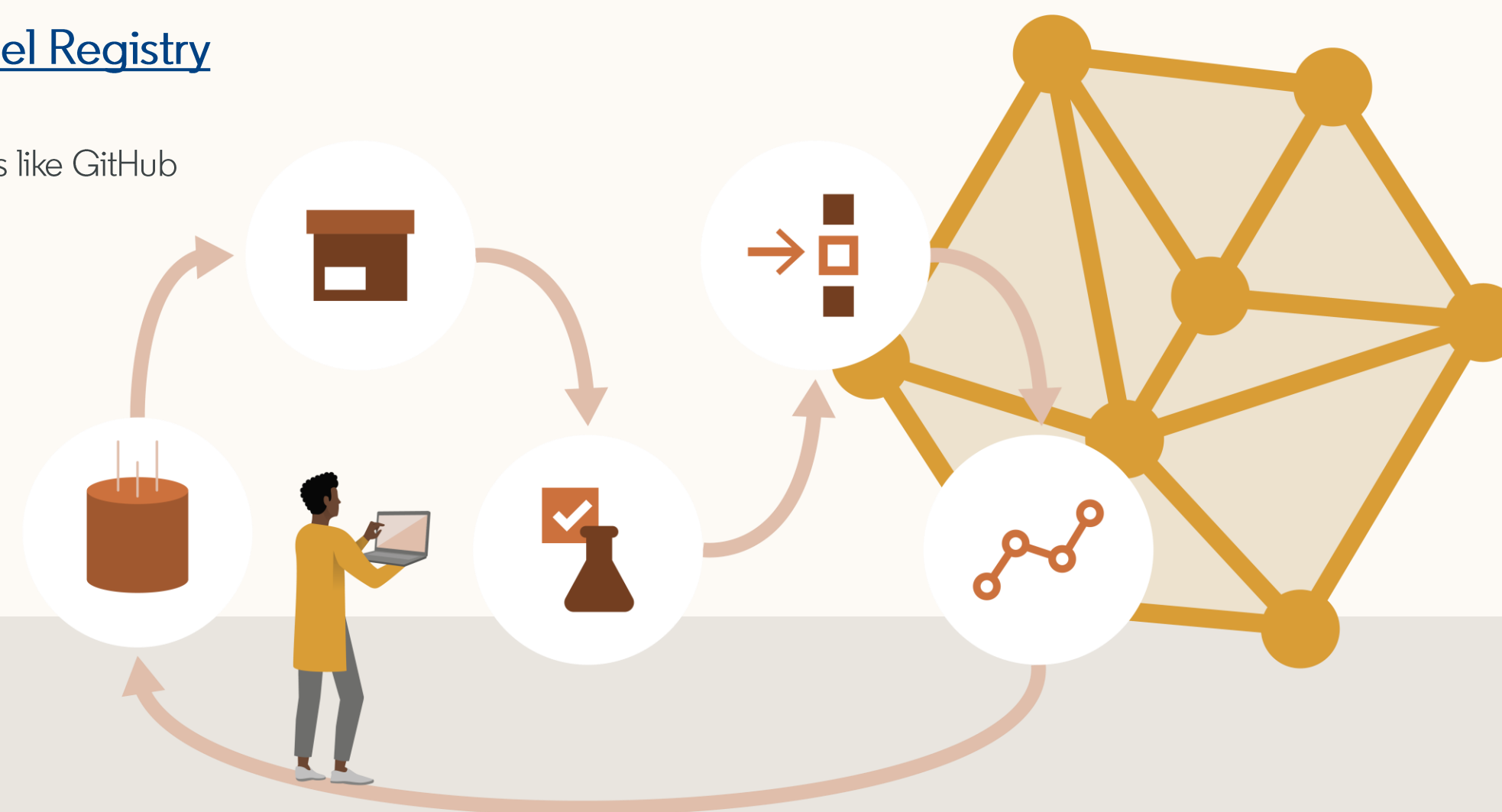
Deep Learning (topic page)

Break into cutting-edge AI, arm your organization with the superpower of deep learning, and build AI systems that weren't possible a few years ago. Deep learning is a subset of machine learning that uses artificial neural networks to mimic the human brain's learning process.

Deep Learning: Model Optimization and Tuning
Author: Kumaran Ponnambalam
Overview: Learn about various optimization and tuning options available for deep learning models and use them to improve models.

Deep Learning: Getting Started
Author: Kumaran Ponnambalam
Overview: Learn the basics of deep learning and get up and running with this technology.

Deep Learning Foundations: Natural Language Processing with TensorFlow
Author: Harshit Tyagi
Overview: Learn foundational deep learning techniques to classify, predict, and generate text using different neural networks.

Deep Learning: Image Recognition
Author: Adam Geitgey
Overview: Learn how to design, build, and deploy a deep neural network to serve as an image recognition system.

PyTorch Essential Training: Deep Learning
Author: Jonathan Fernandes
Overview: Explore the basics of deep learning using PyTorch. Learn about the components of an image recognition model using the Fashion MNIST dataset.
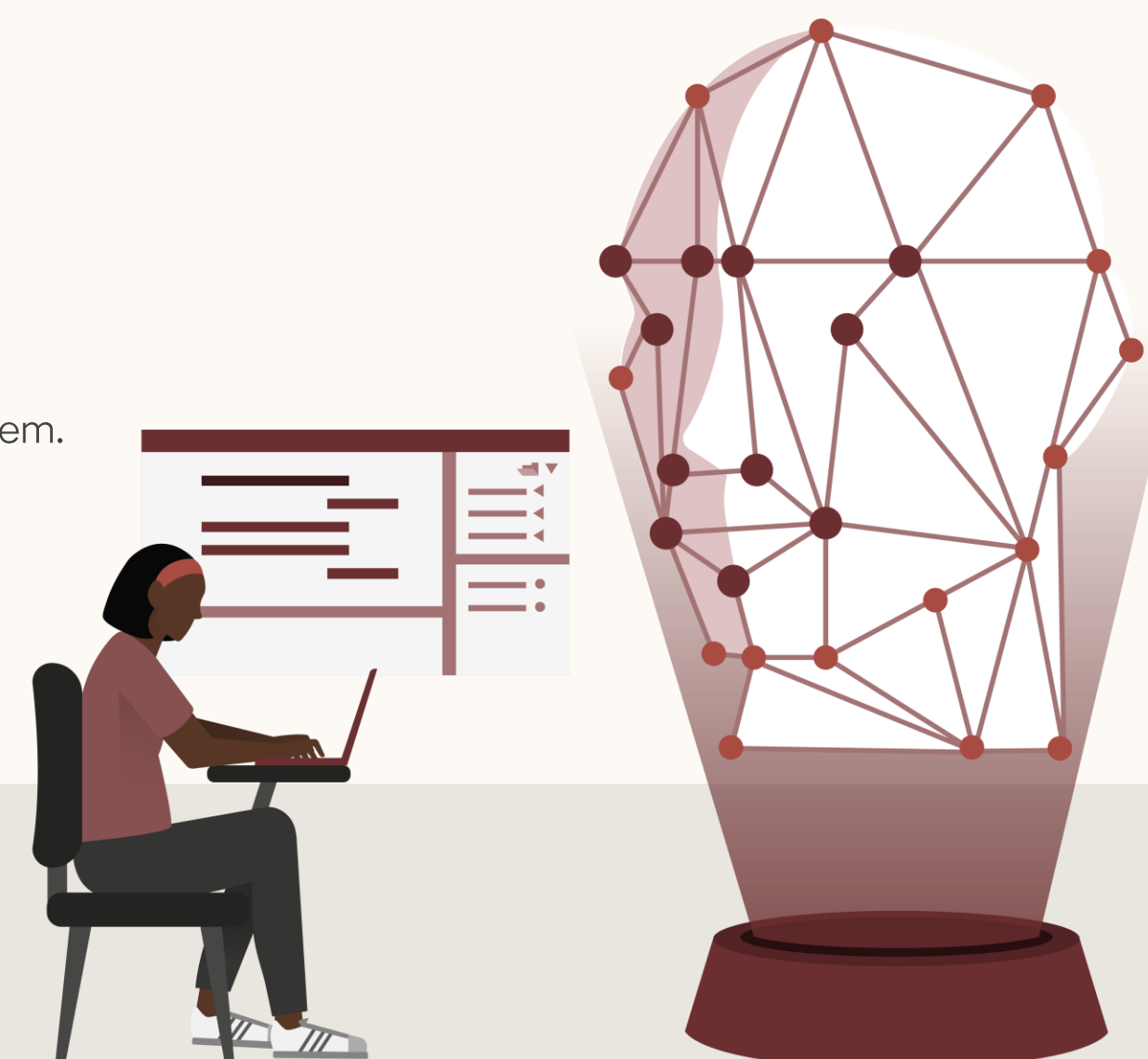
Apache Spark Deep Learning Essential Training
Author: Jonathan Fernandes
Overview: Learn how to do deep learning with images on Apache Spark, using the Databricks deep learning library and Python.

Introduction to Deep Learning with OpenCV
Author: Jonathan Fernandes
Overview: Learn how to use OpenCV, the popular computer vision library, to run pretrained deep learning models.

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Industry-Specific AI (topic page)

New and emerging use cases for AI will transform nearly every industry in the coming years and decades. And savvy organizations and business leaders stand to benefit. Learn how AI industry-specific systems can perform problem-solving and decision-making tasks commonly associated with human intelligence.

Artificial Intelligence and Business Strategy: Case Studies

Author: Anil Gupta, Haiyan Wang

Overview: Learn how AI is deployed within six different industry sectors and discover the value it creates for users and companies.

Artificial Intelligence and Business Strategy

Author: Anil Gupta, Haiyan Wang

Overview: Learn how deploying AI tools can boost your company's competitive advantage and help you leapfrog over your competition.

Security Risks in AI and Machine Learning: Categorizing Attacks and Failure Modes

Author: Diana Kelley

Overview: Learn how and why machine learning and artificial intelligence technology fails and understand ways to make these systems more secure and resilient.

Artificial Intelligence: How Project Managers Can Leverage AI

Author: Oliver Yarbrough

Overview: Learn practical ways to use AI in your projects, including how you can adapt to AI, leverage it to derive value from data, and follow emerging AI trends.

Artificial Intelligence for Marketing

Author: Madecraft licensor, Jim Sterne

Overview: Learn how artificial intelligence is reshaping the way marketing is done at both large and small organizations.

Artificial Intelligence for Cybersecurity

Author: Sam Sehgal

Overview: Learn how to leverage artificial intelligence (AI) to solve complex problems in the field of information security. Along the way, explore the risks of using AI for security.

Becoming an AI-First Product Leader

Author: Tomer Cohen

Overview: Become a successful product leader by adopting an AI-first mindset. Learn the product fundamentals of operating, managing, and leading AI-driven products.

Artificial Intelligence for Business Leaders

Author: Doug Rose

Overview: Explore the artificial intelligence tools and concepts that can solve some of today's most pressing business needs: logistics, customer support, inventory prediction, and more.

Applied AI for Human Resources

Author: Kumaran Ponnambalam

Overview: Get an introduction to logistic regression by exploring how to build supervised machine learning models with Python.

Applied AI for IT Operations

Author: Kumaran Ponnambalam

Overview: Solve common challenges in IT operations using the power of AI. Review use cases in the world of IT ops and learn how to apply AI technologies to address key problems.

Customer Service Using AI and Machine Learning

Author: David Beesley Kay

Overview: Help your service organization take advantage of emerging tech. Explore the new customer service solutions powered by artificial intelligence and machine learning.

Midjourney: Tips and Techniques for Creating Images

Author: Nick Harauz

Overview: Learn the tools and techniques you need to generate great images using the Midjourney generative AI.

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Low-Code AI [(topic page)](#)

No coding experience required—that's right! Upskill and set up your workforce to succeed in the new age of AI with tools that allow anyone to create AI applications without writing technical code.

Introduction to Machine Learning with KNIME

Author: Keith McCormick

Overview: Learn KNIME, a popular open-source platform for predictive analytics and machine learning. Discover how to use KNIME for merging and aggregation, modeling, data scoring, and more.

Machine Learning and AI Foundations: Decision Trees with KNIME

Author: Keith McCormick

Overview: Expand your data science skills and establish a strong foundation in machine learning.

Learning No-Code AI

Author: Sudha Jamthe

Overview: Discover the power of no-code to build quick, easy, effective AI models that can improve your business outcomes.

Computer Vision [(topic page)](#)

Computer vision applications are so varied that it is nearly impossible to imagine a business that couldn't benefit from them.

Image restoration, object detection, and facial recognition are some of the benefits and implementations of computer vision.

Harness the power of next-gen AI. Upskill your workforce and systems with the help of LinkedIn Learning and keep your company ahead of the curve.

Advanced AI: Transformers for Computer Vision

Author: Jonathan Fernandes

Overview: Explore advanced strategies in artificial intelligence and machine learning with model transformers for computer vision.

AI Show: Applied AI - Computer Vision and Optical Character Recognition (OCR)

Author: Microsoft Learn licensor, Seth Juarez

Overview: This course explores computer vision and optical character recognition. Follow along with a discussion about the details of practical OCR implementation.

OpenCV for Python Developers

Author: Patrick Crawford

Overview: Learn how to harness the image-processing power of OpenCV to develop Python scripts that manipulate photos, create custom video streams, and even perform object and face tracking.

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AI/ML Certification Prep (topic page)

Prepare your employees for off-platform certification exams and receive step-by-step guidance on what skills to learn with LinkedIn Learning courses taught by experts in their fields.

AWS Certified Machine Learning - Specialty (MLS-C01) Cert Prep: 1 Data Engineering

Author: Noah Gift

Overview: Learn about data repositories, data ingestion, data warehousing solutions, and more to prepare for the AWS Certified Machine Learning – Specialty (MLS-C01) certification.

AWS Certified Machine Learning - Specialty (MLS-C01) Cert Prep: 2 Exploratory Data Analysis

Author: Noah Gift

Overview: Learn about exploratory data analysis to prepare for the AWS Certified Machine Learning – Specialty (MLS-C01) certification.

AWS Certified Machine Learning - Specialty (MLS-C01) Cert Prep: 3 Modeling

Author: Noah Gift

Overview: Learn about modeling, the process of choosing and training the right machine-learning model, to prepare for the AWS Certified Machine Learning – Specialty (MLS-C01) certification.

AWS Certified Machine Learning - Specialty (MLS-C01) Cert Prep: 4 Machine Learning Implementation and Operations

Author: Noah Gift

Overview: Go over machine learning implementation and operations to prepare for the AWS Certified Machine Learning – Specialty (MLS-C01) certification.

Azure AI Fundamentals (AI-900) Cert Prep: 1 Conversational AI on Azure

Author: James Maguire

Overview: Learn how to manage conversational AI workloads as you prepare for the first domain of Microsoft Azure AI Fundamentals (AI-900) certification exam.

Microsoft Azure Data Scientist Associate (DP-100) Cert Prep: 1 Manage Azure Resources for Machine Learning

Author: Noah Gift

Overview: Prepare for the first domain of the Microsoft Azure Data Scientist Associate (DP-100) exam.

Microsoft Azure Data Scientist Associate (DP-100) Cert Prep: 2 Run Experiments and Train Models

Author: Noah Gift

Overview: Prepare for the second domain of the Microsoft Azure Data Scientist Associate (DP-100) exam.

Microsoft Azure Data Scientist Associate (DP-100) Cert Prep: 3 Deploy and Operationalize Machine Learning Solutions

Author: Noah Gift

Overview: Prepare for the third domain of the Microsoft Azure Data Scientist Associate (DP-100) exam.

Microsoft Azure Data Scientist Associate (DP-100) Cert Prep: 4 Implement Responsible Machine Learning

Author: Noah Gift

Overview: Prepare for the fourth domain of the Microsoft Azure Data Scientist Associate (DP-100) exam.

Exam Tips: Microsoft Azure AI Fundamentals (AI-900)

Author: Emilio Meira

Overview: Explore AI-900 certification exam topics and the capabilities Microsoft AI. Learn about cognitive services, machine learning, image analysis, natural language processing, and more.

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Automated Machine Learning (ML)

Reduce time-consuming, iterative tasks by equipping your data scientists, analysts, and developers to build automated machine learning, also called AutoML models, with high scale, efficiency, and productivity, all while sustaining model quality.

AutoML: Build Production-Ready Models Quickly!

Author: Akintunde Oluwatobiloba Oladipo

Overview: Learn the fundamentals of building production-ready automated machine learning models.

AI Show: Audio Analytics with Azure Automated ML

Author: Microsoft Learn licensor, Seth Juarez

Overview: Explore audio analytics with Azure Machine Learning. Get a look at specific use cases for sorting audio files for classification.

AI Show: Building NLP models with Azure ML AutoML

Author: Microsoft Learn licensor, Seth Juarez

Overview: Learn how to build NLP models in Azure Machine Learning AutoML. Explore data analysis, multilanguage learning, and review the language-to-model routing function.

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ML Cloud [(topic page)](#)

Machine Learning with AWS DeepRacer
Author: Michael Smith
Overview: Discover the fundamentals of machine learning in this introductory course on reinforcement learning with AWS DeepRacer.

Google Cloud Vision API by Example
Author: Jonathan Anand Fernandes
Overview: Harness the power of machine learning with Google Cloud Vision API. Learn how to make calls to the API with Python and leverage key services to quickly gain insights from images.

AI Show: Medical Imaging with Azure Machine Learning
Author: Microsoft Learn Licensor, Seth Juarez
Overview: Learn about medical imaging with Azure Machine Learning, the technical challenges of real-world adoption of machine learning imaging, and key data safety and explainability topics.

ML Framework [(topic page)](#)

Machine Learning with ML.NET
Author: Pranav Rastogi, Microsoft .NET
Overview: This course introduces you to the concepts of machine learning, what you can do with it, and how to get started with ML.NET.

TensorFlow: Working with NLP
Author: Jonathan Anand Fernandes
Overview: Learn about using transformers in natural language processing with TensorFlow.

Hands-On PyTorch Machine Learning
Author: Helen Sun
Overview: Discover the fundamentals of creating machine learning models with PyTorch, the open-source machine learning framework.

Learning JAX
Author: Janani Ravi
Overview: Get an in-depth introduction to the experimental Python library JAX.

TensorFlow: Working with Images
Author: Jonathan Fernandes
Overview: Learn the ins and outs of working with images in TensorFlow 2.

TensorFlow: Neural Networks and Working with Tables
Author: Jonathan Fernandes
Overview: Learn about neural networks and working with tabular data using TensorFlow.

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