AI & Machine Learning Journey

Exploring AI & Machine Learning for the Enterprise Overview (Hands-on) (TTML5502)

Explore AI & Machine Learning Basics, How they Apply in Today's Business Enterprise, New Tools, Trends & More

Course Snapshot

- **Course: Exploring AI & Machine Learning for the Enterprise Overview (Hands-on) (TTML5502)**
- **Duration**: 1 day
- **Audience & Skill Level:** This basic-level course is appropriate for anyone seeking an introduction to these innovative tools and skills and how they can be practically applied in business from an enterprise perspective. Roles include technical executives, stakeholders, project managers, technical managers, data scientists, analysts, developers or cohorts new to a role or an AI / ML initiative.
- **Format / Hands-on:** This course combines engaging instructor-led presentations and practical demonstrations with **light hands-on**, machine-based exercises, challenge labs, use case exploration and engaging group activities.
- **Flexible Delivery Options**: This course can be delivered for your team or organization **online-live (virtual)**, **onsite in-person, self-paced** or across our immersive **blended learning experience platform (LXP).**
- **Public Schedule**: This course is currently available on our Public Open Enrollment Schedule.
- **Customizable**: We're flexible! This course agenda, topics, labs, hours and delivery modalities can be adjusted to target your specific training skills objectives, tools and learning goals. Please ask for details.

Description

Exploring AI & Machine Learning for the Enterprise Overview (with Light Hands-on) is a basic, primer-level course designed to provide you with a solid 'first-look' at essential AI and machine learning technologies, related cutting-edge skills, and the innovative tools that support them, with a focus on how they are applied in business in a practical way. These transformative technologies offer paths to enhance decision-making, quickly modernize and improve operational efficiency, and drive innovation within your organization.

Our engaging AI practitioner will guide you through useful lectures, valuable demonstrations and group discussions, along with light-hands-on activities working with some of the core skills and tools. Throughout the course, you'll learn what AI is and isn't, differentiating between AI, Machine Learning and Deep Learning, and what's happening with trending Large Language Model use. You'll also examine processing language, images, and audio with AI. No deep math skills required. We'll also touch on hot topics and trends in AI, NLP, Neural Networks, Generative AI, GPT, and a preview of what's next for AI in the business context.

You'll exit the class with a high-level understanding of these technologies to a conversant level, able to move forward to engage in related discussions and participate in strategic decisions around AI and Machine Learning implementations, as well as ready to springboard into next-level learning programs in these areas.

Learning Objectives

Throughout the course you'll:
- Gain a clear introduction to the exciting world of AI and Machine Learning, along with current trends and tools, enabling you to participate confidently in strategic discussions and help to make informed decisions.
- Get a hands-on introduction to a few user-friendly tools and skills offering you a taste of the practical side of AI and Machine Learning.
- Explore the practical business applications of AI and Machine Learning in an everyday context, and the potential influence of these technologies on your organization.
- Learn the basics about algorithms, NLP, Neural Networks, GPT, Generative AI and other innovative tools, and how
- Explore how AI plays a pivotal role in processing language, images, and audio
- Learn how organizations maximize use of these technologies to their benefit to improve processes and maximize efficiencies

If your team requires different topics, additional skills or a custom approach, our team will collaborate with you to adjust the course to focus on your specific learning objectives and goals.

Audience

This course is ideally suited for a wide variety of technical learners just getting started with AI or machine Learning, seeking a primer-level overview of these technologies, skills and related tools. Attendees might include:

- Developers aspiring to be a 'Data Scientist' or Machine Learning engineers
- Analytics Managers who are leading a team of analysts
- Business Analysts who want to understand data science techniques
- Information Architects who want to gain expertise in Machine Learning algorithms
- Analytics professionals who want to work in machine learning or artificial intelligence
- Graduates looking to build a career in Data Science and machine learning
- Experienced professionals who would like to harness machine learning in their fields to get more insight about customers

Pre-Requisites

Students attending this class should have a grounding in Enterprise computing. While there's no particular class to offer as a prerequisite, students attending this course should be from a somewhat technical background, and familiar with Enterprise IT, have a general (high-level) understanding of systems architecture, as well as some knowledge of the business drivers that might be able to take advantage of applying AI.

Basic knowledge of Python scripting is also helpful but not required. The hands-on labs in this course may leverage some basic Python scripts as needed, but the labs can be completed in a 'follow-along' format, under the guidance of the instructor. Prior experience with Python can be helpful but is not necessary.

Next Steps / Follow-on Courses

We offer a wide variety **(over 40)** of follow-on courses and learning paths for learners of all skill levels in AI for Business Users, Hands-on AI & Machine Learning; Applied AI; AI for developers, testers, data analytics, machine learning, deep learning, programming, intelligent automation and many other related topics. Please see our catalog for the current **AI & Machine Learning Courses, Learning Journeys & Skills Roadmaps**, list courses and programs.

Enhanced Learning Services: Please also ask about our robust Learning Experience Platform (LXP), Skills Assessment & Skills Prep Services, Skills Immersion Programs & Camps, Coaching and Mentoring Services and Extended Learning Support programs.

Course Topics / Agenda

Please note that this list of topics is based on our standard course offering, evolved from typical industry uses and trends. We'll work with you to tune this course and level of coverage to target the skills you need most. Topics, agenda and labs are subject to change, and may adjust during live delivery based on audience skill level, interests and participation.

1. **Introduction to AI & Machine Learning**
- Understand what AI and Machine Learning are and why they're critical for modern business
- Exploring definitions and types of AI
- Discussing AI in the Modern Age and its role in business
- Embrace Change: Learn and

Build Confidence using the Tools – Don't be Replaced By Them

2. **Deeper Dive into Machine Learning**
- Basics of how mathematics are used in or apply to AI
- Algorithms: What are they and how are they used in AI and ML
- Supervised vs Unsupervised

- Classification, Regression, Clustering, Dimensionality Reduction, and Ensemble Methods
- The role of Machine Learning in AI and business decision-making
- Demo: Algorithms in Action
- Case study: Review a real business scenario where Machine Learning was used to increase efficiency.

3. **Leveraging AI in Business & Decision Making**
- Discussing key business areas where AI adds value: Operations, Marketing, Sales, HR, content development, coding and software development
- Explore how AI is used in business decision-making
- Introduction to predictive analytics
- Using AI for strategic decision-making
- Demo & Review: Explore different AI tools used in businesses and the results achieved.

4. **Hot Trends for AI in Business: Large Language Models (LLM), Generative AI and GPT**
- Understand the basics of Generative AI and how it differs from other AI techniques
- Introduction to GPT and its applications in various sectors
- Explore how GPT uses machine learning to generate human-like text based on the input it receives.
- Understand the concept of language models and how they are trained using large amounts of text data
- Lab: Solve Business Problems with a GPT based tool and discuss its implications.

5. **Basics of Neural Networks**
- What are they and how are they used?
- Basic parts: Neurons, activation functions, interactions.
- Types: Feedforward, recurrent, convolutional neural networks overview.
- How they learn: Forward propagation, backpropagation explained.
- Training Neural Networks: Importance of data preprocessing in training.
- Deep Neural Networks: Advantages and practical applications overview.
- In Action: Image recognition, language processing, etc. use cases.
- Ethical Considerations: Addressing biases and ethical concerns in neural networks.

6. **Natural Language Processing (NLP) & Sentiment Analysis**
- What is NLP and how is it used?
- NLP Language and Semantic Meaning, Bigrams, Trigrams, n-Grams, Root Stemming and Branching
- Introduction to Sentiment Analysis: Sentiment indicators, Sentiment Sampling, Predicting Elections based on Sentiment Analysis
- Lab: Use an online sentiment analysis tool to analyze customer feedback from a popular business.

7. **Using AI for Image, Video, and Audio Processing (**
- Learn about Image processing and Identification, Facial Analysis, Audio Processing
- Discuss the role of AI in analyzing streaming video and real-world AV processing
- Lab: Use AI in recognizing and analyzing images

8. **AI for Business Technical Tools: Data Science, Deep Learning & The Cloud**
- Applying AI in Data Science overview
- Tools: Python, NumPy, Pandas, SciKitLearn, Hadoop, Spark
- NoSQL Databases
- Deep Learning overview
- Tools: Tensorflow, Keras, NLTK
- AI for Business in the Cloud overview
- Tools: Azure, Google, IBM, Amazon solutions

9. **Practical Applications and the Future of AI in Business**
- What's next in applied AI for businesses
- New AI trends shaping the future of business
- Ethical considerations when implementing AI

Next-Steps
- Hands-on Practice
- Resources
- AI & ML Communities

Setup Made Simple! Learning Experience Platform (LXP)

All applicable course software, digital courseware files or course notes, labs, data sets and solutions, live coaching support channels and rich extended learning and post training resources are provided for you in our "easy access, no install required" online **Learning Experience Platform (LXP),** remote lab and content environment. Access periods vary by course. We'll collaborate with you to ensure your team is setup and ready to go well in advance of the class. Please inquire about set up details and options for your specific course of interest.

For More Information

For more information about our training services (instructor-led, self-paced or blended), collaborative coaching services, robust Learning Experience Platform (LXP), Career Experiences, public course schedule, partner programs, courseware licensing options or to see our complete list of course offerings, solutions and special offers, please visit us at **www.triveratech.com**, email **Info@triveratech.com** or call us toll free at **844-475-4559.** Our pricing and services are always satisfaction guaranteed.

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