Building Intelligent Applications with AI and ML - Level 2 Training

Duration: **2 Day**

BILGINÇ IT Academy
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Overview

Learn Deep Learning concepts and concepts of NLP with this intermediate AI course.

Most intelligent applications involve using huge quantities of data in various formats. Deep learning and linguistics are widely becoming a part of intelligent applications in every field. Natural Language processing is one of the broadly applied areas of machine learning to effectively analyze massive quantities of unstructured, text-heavy data. Intelligent applications using NLP include models that analyze speech and language, uncover contextual patterns, and provide insights from text and audio.

This course focuses on covering deep learning concepts required to understand NLP and then focuses on introducing you to the concepts of NLP slowly taking you to basic and advanced NLP models for text processing, analytics, and building applications using NLP.

Is This The Right Course?

- Basic familiarity with Python programming.
- Basic understanding of Data Terminologies.
- Familiarity with enterprise IT.
- Foundational knowledge in mathematical concepts like linear algebra and probability
- Basic Linux skills
- Basic SQL skills
- Should have attended 'Building Intelligent Applications with Artificial Intelligence (AI) and Machine Learning (ML) Level 1

Who Should Attend?

This is an Intermediate-level hands-on course suitable for everyone who wants to explore the field of Artificial Intelligence (AI) and Machine Learning (ML). This course covers Deep Learning concepts, Natural Language Understanding and Natural Language Processing, Text Analytics and identifying customer/user sentiment in the available data. This is a level 2 course in building your skills for developing Intelligent applications using Machine Learning and Artificial Intelligence. Anyone who wants to shift their career to AI and ML and who attended Level 1 course can attend this course such as

- Business Analysts
- Data Analysts
- Developers
- Administrators
- Architects
- Managers

Prerequisites

- Basic familiarity with Python programming.

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What You Will Learn

- Understand the basics of Deep Learning
- Understand Convolutional Neural Networks, their architectures and their applications.
- Understand Recurrent Neural Networks, their architectures and their applications
- Understand the basics of Natural Language Processing.
- Understand various NLP Libraires
- Understand and perform Text Analytics
- Apply NLP techniques to predict customer sentiment
- Dealing with Real-World data

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Outline

1. **Deep Learning Essentials**
    - Understanding Neural Networks, Artificial Neural Network, Perceptron concepts
    - Understanding activation functions and why they are important?
    - Understanding Convolutional Neural Networks
    - CNN Architectures
    - CNN applications
    - Understanding Recurrent Neural Networks
    - RNN Architectures
    - RNN Applications
    - Natural Language Processing
        - Foundations of NLP
        - Various NLP Libraries
        - Understand NLP concepts like Morphology, Lemmetization, Stemming, Part-of-Speech tagging
        - Understanding Text Analytics
        - Performing Text Analytics with a case study
    - Natural Language Processing with Deep Learning
        - Applications of Deep Learning in NLP
        - Deep Learning Libraries for building NLP applications
        - Word Embeddings
        - Identifying Sentiments in Customer Reviews - case study
2. **Advanced NLP Models**
    - Understand and Differentiate between LSTMs, GRUs, GPT Models
    - Understand Sequence to Sequence Models
    - Understand Attention Models
    - Understand Transformer Models
    - A Deep Dive into Machine Translation using NLP
    - Building a real-world End-End NLP Application
        - Data Gathering
        - Data Cleaning and Pre-processing
        - Building and evaluating NLP Models
    - GUI and REST APIs
        - Building UI for your Machine Learning Models
        - Building a REST API for your Models