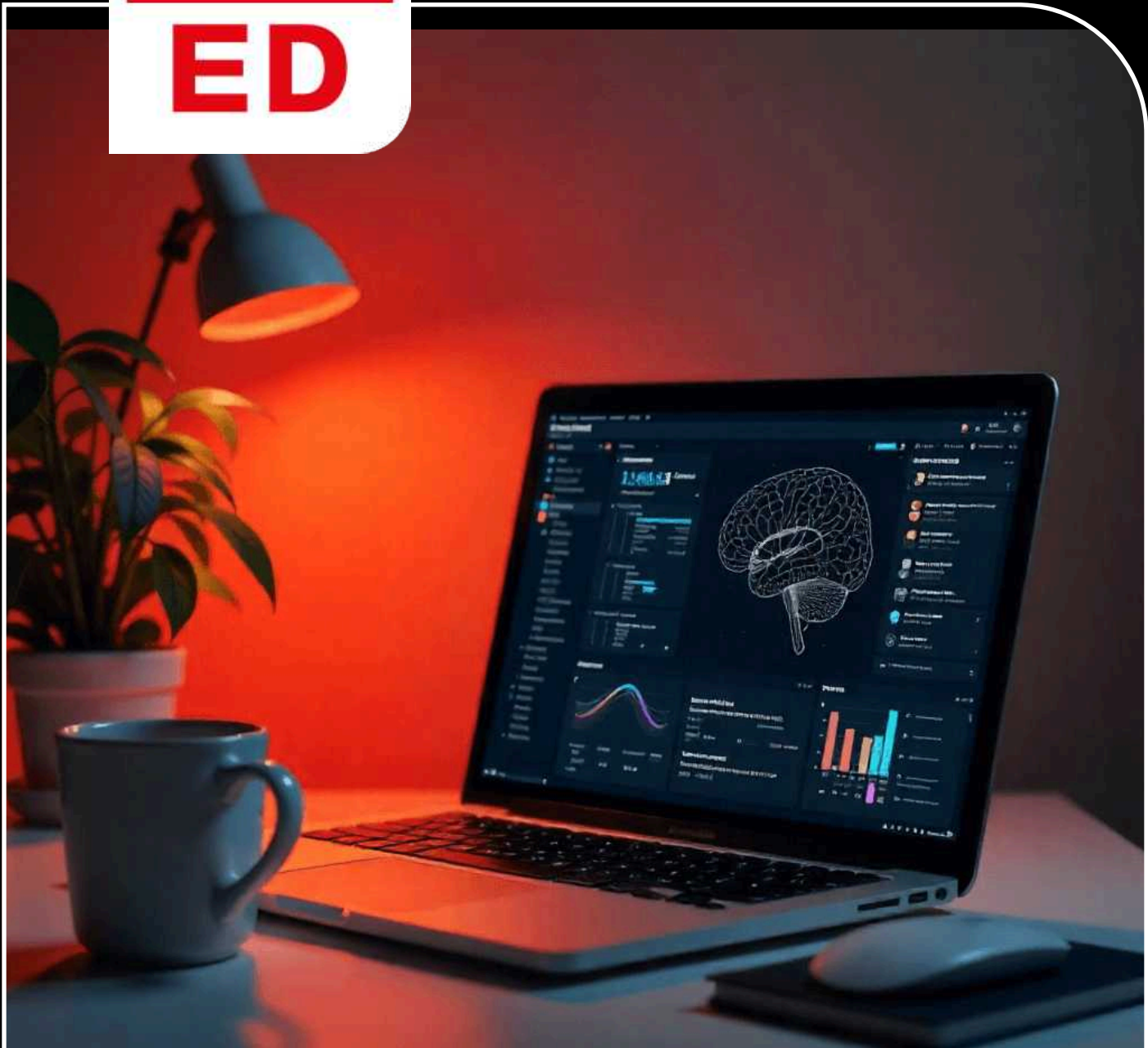




Real Time College

🌐 rt-ed.co.il ✉ info@rt-ed.co.il ☎ 077-7067057



Deep Learning with PyTorch Course

Duration: 65 Hour | **Hands-On Training: 60%**

TABLE OF CONTENTS

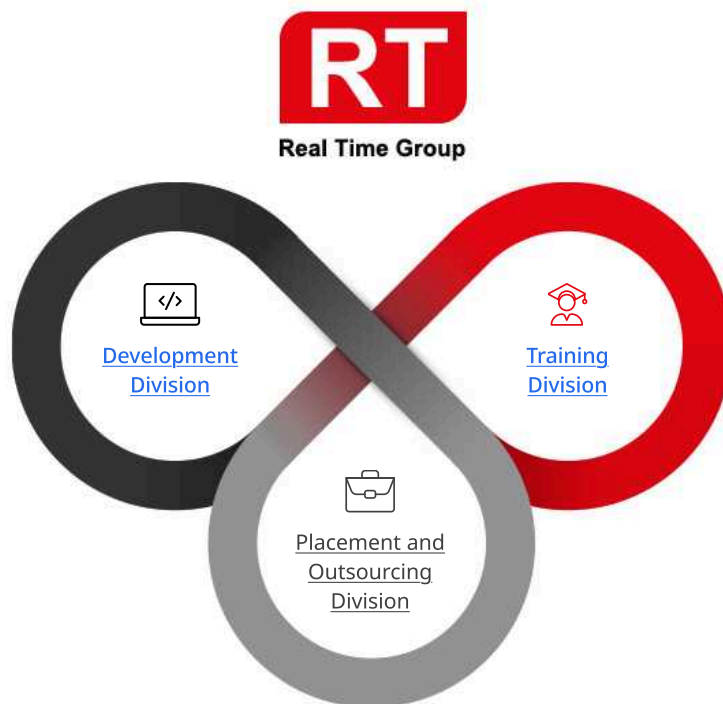
About RealTime Group	3
Course Overview	6
Who should attend, Prerequisite/Advantage	7
list of Software oriented courses	8
Notes and highlights	11

ABOUT REAL TIME GROUP

Real Time Group is a multi-disciplinary dynamic and innovative Software Solutions Center, established in 2007.

Providing Embedded Linux solutions, professional IT services and consulting, end-to-end flexible system infrastructure, outsourcing, integration and training services for Hardware and Software industries.

The company is divided into the following three Divisions:



RT-ED: TRAINING DIVISION



Professional Training Services for Hardware, Software, RT Embedded, Cyber and IT industries. We provide the knowledge and experience needed to enable professional personal to Develop, Integrate and QA Hardware, Software and Networking Projects.

Throughout the course we will be using the latest DevOps, QA and Automation equipment which are adopted by the industry. In order to ensure experience, all courses are practical – hands-on-training. The latest Development, QA and Automation equipment which are adopted by the industry are used.

All students are supplied with necessary equipment (i.e. software license, AWS Account, etc) for Class -work \ Home-work and course projects.



DEVELOPMENT DIVISION



Professional Training Program with Practical Experience

At RTG College, students gain hands-on experience through our development division, which works on diverse projects for clients in high-tech, security, and finance. Students are exposed to real-world challenges and learn industrial workflows, including teamwork in a professional setting, modern development methodologies, and advanced development tools.

Placement Services for Graduates

PLACEMENT AND OUTSOURCING DIVISION



RTG graduates enjoy comprehensive placement services

to help them secure their first roles in the field.

Our unique program combines education and job placement, offering opportunities in our development division, positions in our software house for qualified graduates, and connections to leading companies for sought-after jobs.

Join us at RTG College for top-tier training and a genuine opportunity to **start your career right after graduation!**

COURSE OVERVIEW

Deep Learning extends traditional neural networks by using multiple hidden layers, enabling models to learn complex patterns and extract meaningful representations from large volumes of unstructured data such as images, audio, and text.

PyTorch is one of the leading frameworks for implementing Deep Learning systems. It provides a flexible computational graph, efficient tensor operations, and built-in support for automatic differentiation—making it widely used in both research and industry.

Throughout this course, students will learn how to build, train, and optimize neural networks using PyTorch. Core topics include forward and backward propagation, model training workflows, and practical implementation of key architectures such as Convolutional Neural Networks (CNNs), Recurrent Neural Networks (RNNs), and Autoencoders.

WHO SHOULD ATTEND\ PREREQUISITES

Who should attend:

- Learners who want to quickly gain practical skills in building ML/AI applications using PyTorch.
- Developers, data analysts, or students looking to strengthen their understanding of Deep Learning.
- Anyone interested in applying neural networks to real-world problems such as computer vision, NLP, or data modeling

Prerequisite:

- Basic knowledge of Python programming.
- No prior experience in Deep Learning is required.

LIST OF SOFTWARE ORIENTED COURSES

The following table concludes the list of Software oriented courses in the Track, with a short description and course length.

Feel free to click on the required course name for an elaborated Syllabus per course.

COURSE NAME | COURSE DESCRIPTION

Basic ANN:

- Introduction to ANN Section
- Perceptron Model
- Neural Networks
- Activation Functions
- Cost Functions and Gradient Descent
- Backpropagation

PyTorch Explanation:

- Preparing the Data
- Creating and Training the Model
- Model Evaluation
- Exploratory Data Analysis
- Data Preprocessing and Creating a Model
- Model Evaluation and Predictions
- EDA and Preprocessing
- Dealing with Overfitting and Evaluation
- Exploratory Data Analysis
- Dealing with Missing Data
- Categorical Data
- Data PreProcessing
- Creating and Training a Mode
- Model Evaluation

COURSE NAME

COURSE DESCRIPTION

LENGTH (AH)

CNN:

- Image Filters and Kernels
- Convolutional Layers
- Pooling Layers
- MNIST Data Set
- Creating and Training the Model
- Model Evaluation
- Evaluating the Model
- Reading in the Data
- Data Processing
- Creating the Model

RNN:

- RNN Basic
- Vanishing Gradients
- LSTMS and GRU
- RNN Batches
- Batch Generator
- Creating the Model
- LSTMs and Forecasting
- Time Series

NLP:

- Text Processing
- Creating Batches
- Creating the Model
- Training the Model
- Generating Text

COURSE NAME

COURSE DESCRIPTION

LENGTH (AH)

Autoencoders:

- Autoencoder Basics
- Autoencoder for Dimensionality Reduction
- Autoencoder for Images
- Noise Removal

GANs:

- The Model
- Model Training
- Deep Convolutional Generative Adversarial Networks

Transformers:

- Transformers Basics (Logics)
- Creating Model
- Training Model

MEET YOUR INSTRUCTOR



ALEX SHOYHIT

Head of Machine Learning Departments

Alex holds a B.Sc. in Information Systems and an M.A. in Electrical and Electronic Engineering. As a ML Engineer at RTG, Alex specializes in the field of artificial intelligence, applying over 13 years of experience in project development, management, and transitioning from development to production in various domains such as Linux Embedded. Throughout his career, Alex developed his expertise working with the integration of Machine Learning and Deep Learning in Computer Vision & Data Analysis field.

What Do The Course Graduates Say?



Grisha
Data Science
Course Graduate

I highly recommend the Data Science course at RTG College for anyone looking to enter the field. The small groups, personal attention, and emphasis on real projects gave me a significant advantage in job interviews.



Binyamin
Data Science
Course Graduate

Within a few months, I acquired practical tools that enabled me to integrate into my first position at a tech company, with a significantly increased salary. The industry-experienced instructors and practical projects made all the difference.



Shaked
Full Stack Course
Graduate

The Tools I Gained From The Course Are Among The Most Up-To-Date In The Development Market Today. What Gave Me Peace Of Mind Was Knowing That At The End Of The Course, A Professional Placement Company Would Support Me In Entering The Field

MISCELLANEOUS

- Course opening is contingent upon minimum enrollment.
- Registration fees are non-refundable except in cases where the college does not open the course.
- All content and implications of the syllabus are subject to college regulations.
- The college informs students that there may be changes in course content and scheduling.
- The college commits to notifying students of any changes.
- The college reserves the right to modify course content at its sole discretion.





Thank You!

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