EUROPEAN INFORMATION TECHNOLOGIES CERTIFICATION INSTITUTE, ASBL.

Brussels, Belgium, European Union

# CERTIFICATE

## Federico Manzoni

Has successfully completed test requirements of
The European Information Technologies Certification Programme

## EITC/AI/TFF TensorFlow Fundamentals

**Certification Programme examination result:** 93.33%

**Certification Programme description:**

Introduction to TensorFlow: fundamentals of machine learning, basic computer vision with ML, introducing convolutional neural networks, building an image classifier; Neural Structured Learning with TensorFlow: Neural Structured Learning framework overview, training with natural graphs, training with synthesized graphs, adversarial learning for image classification; Natural Language Processing with TensorFlow: tokenization, sequencing - turning sentences into data, training a model to recognize sentiment in text, ML with recurrent neural networks, long short-term memory for NLP, training AI to create poetry; Programming TensorFlow: introduction to TensorFlow coding, introducing TensorFlow Lite, TensorFlow Lite for Android, TensorFlow Lite for iOS, TensorFlow.js, TensorFlow.js in your browser, preparing dataset for machine learning, building a neural network to perform classification, using TensorFlow to classify clothing images; Text classification with TensorFlow: preparing data for machine learning, designing a neural network; Overfitting and underfitting problems: solving model's overfitting and underfitting problems; Advancing in TensorFlow: saving and loading models, TensorFlow Lite, experimental GPU delegate; TensorFlow in Google Colaboratory: getting started with Google Colaboratory, getting started with TensorFlow in Google Colaboratory, building a deep neural network with TensorFlow in Colab, how to take advantage of GPUs and TPUs for your ML project, upgrade your existing code for TensorFlow 2.0, using TensorFlow to solve regression problems; TensorFlow 2.0: introduction to TensorFlow 2.0; TensorFlow high-level APIs: loading data, going deep on data and features, building and refining your models; TensorFlow Extended (TFX): ML engineering for production ML deployments with TFX, what exactly is TFX, TFX pipelines, metadata, distributed processing and components, model understanding and business reality; TensorFlow Applications: Air Cognizer predicting air quality with ML, helping Doctors Without Borders staff prescribe antibiotics for infections, helping doctors detect respiratory diseases using machine learning, utilizing deep learning to predict extreme weather, helping paleographers transcribe medieval text with ML, Airbnb using ML categorize its listing photos, using machine learning to tackle crop disease, AI helping to predict floods, positive current, Daniel and the sea of sound, beneath the canopy, using machine learning to predict wildfires, tracking asteroids with machine learning, identifying potholes on Los Angeles roads with ML, dance Like, an app that helps users learn how to dance using machine learning, how machine learning is being used to help save the world's bees

**Certificate Programme version/revision: EITC/AI/TFFv1r1**

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