



Certificate of Accomplishment

the IN2LAB research group, at the Faculty of Engineering in Universidad de Antioquia, hereby certifies

Isabela Bedoya Gaviria

has completed the course

Inteligencia Artificial para las Ingenierías y Ciencias

This course is a comprehensive and technical introduction to the methods and techniques to create descriptive and predictive models from data. The topics addressed aim at covering the model generation workflow from data acquisition to business performance evaluation, and include Python programming, data annotation and cleaning, performance metrics assessment, model training and evaluation and algorithm design. The methods and algorithms covered include Decision Trees, Random Forests, SVMs, Neural Networks, clustering, PCA, cross validation, hypothesis testing, among others, with applied programming labs with tabular data, time series data and images, both from synthetic datasets and Kaggle competitions, running on Jupyter notebooks over Google Colab requiring to use the following libraries: Numpy, Pandas, Scikit-Learn, Tensorflow, Scipy.

The above identity was verified through email isabela.bedoya@udea.edu.co, for course id ai4eng.v1.udea.r3.

This certificate serial number is fW8xeMJ130aeGDbil7Fq1KEim0yDISEmosEPEZRniAuAah6YkkUF/38JxnRK/xz8bC1V5iP9UergDXVpE9EH7JRZzl+8P5C+nmnZOkByf3k= and was issued on 2025-07-21 12:21:50.

IN2LAB is certified as an A1 group at MINCIENCIAS, Colombia with registration code COL0025934