Practice of AI in geomatics training

Duration : 2 days (14h)

Pedagogical objectives

How can AI provide practical assistance in your geomatics business? What are the tools and risks involved?

The aim of this training course is to provide the keys to understanding AI as applied to the fields of land management, geomatics, and their associated data and issues.

It is aimed at businesses, government agencies, and local authorities alike.

Contents

Theoretical introduction to AI

- Understanding AI and its definitions
- The importance of AI in geomatics
- Introduction to deep learning
- Neural networks
- The data corpus
- The concept of model training
- Metrics and model validation
- Concepts of reinforcement learning
- Current tools: applications and target audience

Major applications of AI

- Detection of territorial objects
- Instance segmentation
- Image and data classification
- Detection of changes in geospatial data
- Other applications: regression, clustering, etc.

Practical illustration of theoretical aspects of AI

- Identify problems that can be addressed by AI
- Assess the cost of implementation
- Prospects and limitations
- Design a concrete corpus
- Train a model and monitor metrics
- Analyze and understand model results
- Validate and qualify a model
- The life cycle of an AI model

Practical exercise: implementing AI

- Defining a business problem
- Choosing the appropriate tools and methods
- Preparing the corpus: selecting and formatting data
- Training a model: monitoring and interpreting metrics
- Analyzing results and making decisions
- Validating and qualifying the model obtained
- Understanding the life cycle of a model

Target audience

IT managers, geomatics specialists, climate experts, and urban planners who want to discover the uses of AI applied to geomatics issues.

Prerequisites

Knowledge of GIS and geomatics

ArcGIS Pro license and Image Analyst extension (arx iT does not provide Esri licenses to trainees during the training course)

Bring your own laptop to the training course

Teaching methods

Digital teaching materials provided with real-life examples, practical exercises, and technical data sheets

The trainer alternates between demonstrative and active methods, focusing on discussion and practical exercises or real-life examples of AI implementation

Assessment methods & certification

Assessment of learning outcomes through practical exercises

Qualitative assessment of the training through a satisfaction questionnaire

Training certificate issued to the trainee at the end of the training

Training accessibility

arx iT is committed to facilitating access to its training courses for people with disabilities and to implementing the necessary educational, material, and organizational adaptations.

Terms and conditions of access

Request a quote via our contact form or by email at formation@arxit.com

formation@arxit.com ■ www.FormationSIG.com ■ www.arxit.com