



Scaling AI Training through Metro Maps

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Network eAcademy & WP6 T4 at GN5-2

SIG-AI

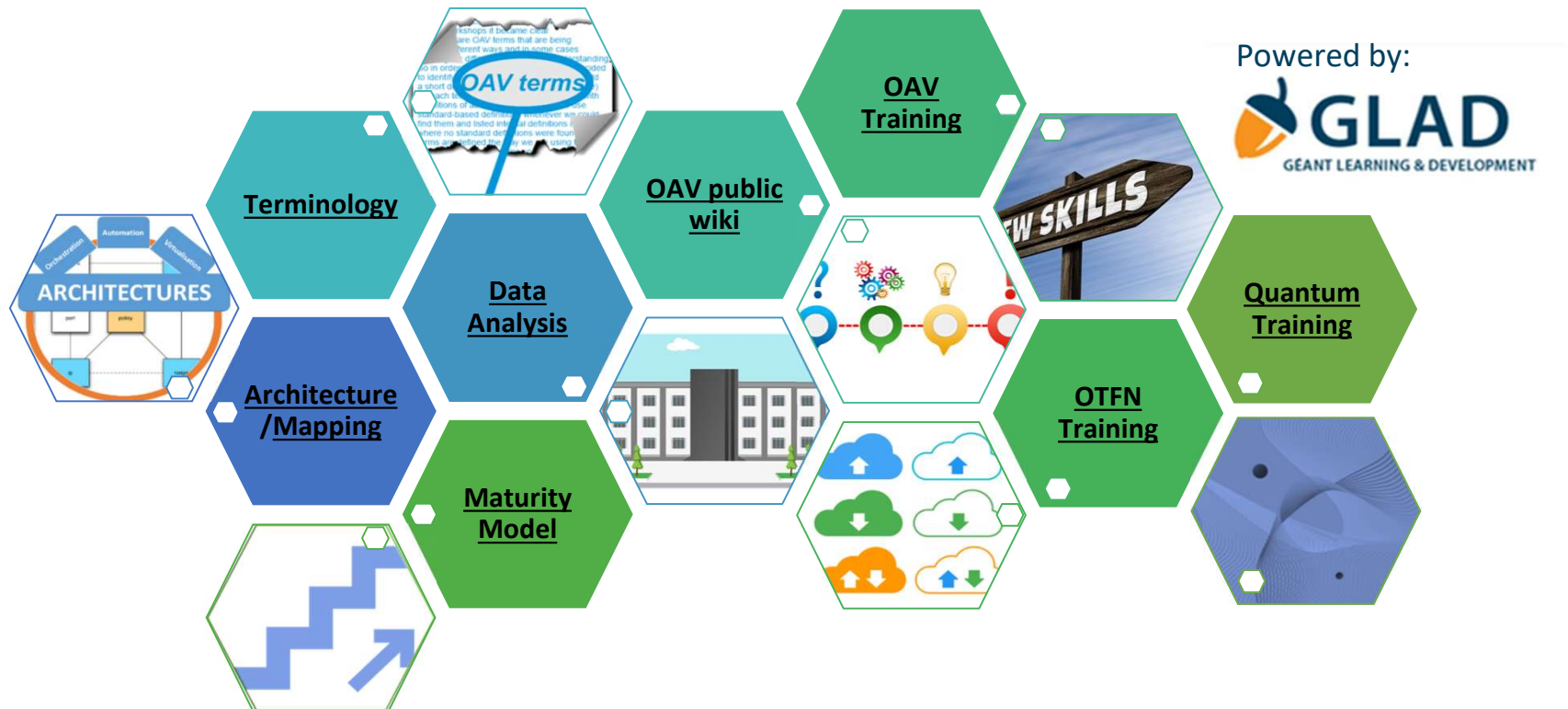
11 March 2026

Public (PU)

GN5-2

The Network eAcademy

The Network eAcademy was born to help and support organisations in human capital development in Network-development-related domains, as an umbrella covering several activities



The Network eAcademy



Network eAcademy Training Portal

Follow our training programmes in Network Automation, AI, Quantum Technology, Time & Frequency Networks and Fibre Sensing (coming soon). All learning units are free of charge and can be consumed on-demand at your own pace. Each of these programmes can be accessed via links or following a metro map suggesting recommended training paths. [Read more...](#)



OAV Maturity Model

Our model defines four main dimensions that describe different aspects of OAV, each further specified using subdimensions that highlight the important OAV areas of each dimension. The short and long descriptions of stages for each subdimensions help quickly identify the current status in the organisation and the main tasks that need to be accomplished in order to advance to the next level. [Read more...](#)



OAV Architectures

A high-level architectural blueprint (the TM Forum Open Digital Architecture, or ODA), provides R&E institutions with an easy way to understand and compare the architectures of their Network Management (NMS), Operations and Business Support Systems (OSS/BSS) and helps guide community efforts towards the creation of interoperable systems and operations. [Read more...](#)



OAV Terminology

During our discussions with NRENs it became clear that there are OAV terms that are being used in different ways and in some cases with slightly different meaning and understanding. In order to have a common basis we decided to identify a list of relevant OAV terms and add a short definition with a reference link (source) for each term as well as an acronym table. [Read more...](#)



OAV Community Portal

Applied OAV examples by country. Follow our community portal to see what NRENs are implementing in their own environments. [Read more...](#)






GNA-G Network eAcademy WG

Research and Education Networks and institutions around the globe are facing the same challenges as in the GÉANT community. As Artificial Intelligence strikes in all areas, new tools arise, others disappear or stop being used, and with the daily operations of the network, an up-to-date training programme with inputs from actors in all the regions of the world is a must. The GNA-G Network eAcademy Working Group offers monthly open meetings to share knowledge and foster discussions to improve the content of the Network eAcademy. [Read more...](#)

<https://wiki.geant.org/spaces/NETDEV/pages/870744201/Network+eAcademy>

Network eAcademy Training Portal

Network Automation		
		Take network automation classes to learn about orchestration, automation and virtualisation of networks. Get started with network architecture, data modeling, data formats and protocols and CI/CD and then move on towards intelligent networks using data analytics and AI. Learn more about Network Automation....
Artificial Intelligence		
		Follow our track for AI to learn about the basics from classical machine learning to generative AI and autonomous networks. Or explore the AI use cases with a focus on FCAPS - fault management, configuration management, accounting & cost management, performance management and security management. Learn more about Artificial Intelligence....
Quantum Technology		
		Follow our Quantum technology track to learn about basics such as Qubits, Qubit Entanglement and Teleportation. Find out about Quantum Key Distribution and quantum simulation. Or learn the latest on standards and APIs. Learn more about Quantum Technology....
Time and Frequency Networks		
		Follow our track for Time and Frequency Networks to learn about the basic metrology concepts of time and frequency, or find out about working with White Rabbit in networks. Other learning units will offer an insight into Optical Carrier Distribution, or the ELSTAB system, which is which is used for Time and Frequency dissemination via optical fibers. Learn more about Time and Frequency Networks....
Fibre Sensing		
		Explore our track for Fibre Sensing to learn about technologies Distributed Fibre Optic Sensing (DFOS) ranging from forward transmission based sensing to scattering based sensing and investigate data acquisition and data management frameworks. Or follow NREN use cases and experiments as well as use cases involving the research community. Learn more about Fibre Sensing....(coming soon)

<https://wiki.geant.org/spaces/NETDEV/pages/870744119/Network+eAcademy+Training+Portal>

Network Automation eAcademy **Sep 2023**



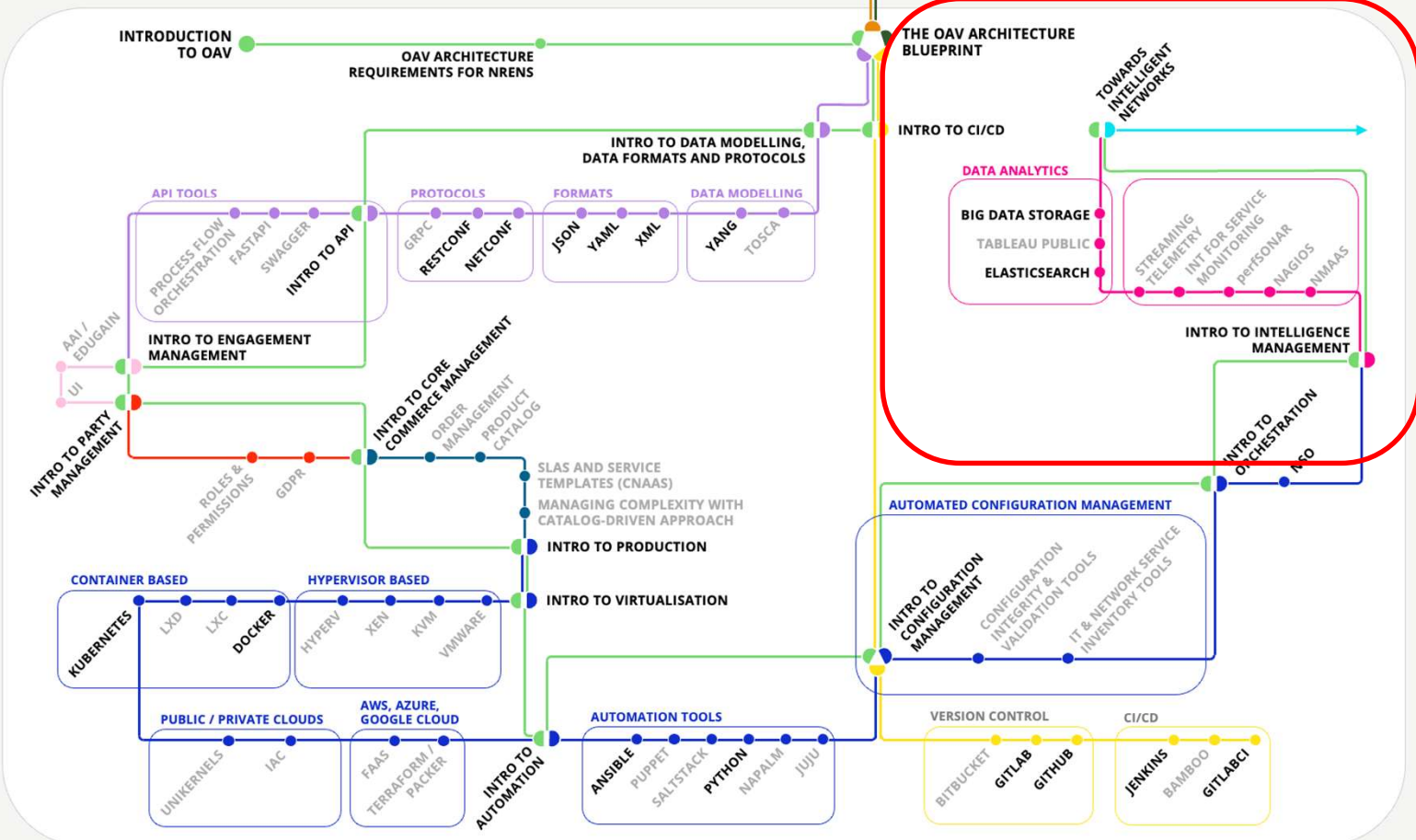
Legend

- Unit / ■ Document
- Released / ● Not released
- ◀▶ Exchange point
- 🔄 You can jump back and forth between this station and all exchange points at any time

Tracks

- GENERAL INTRODUCTION
- AGILE, DevOps, CI/CD
- DECOUPLING & INTEGRATION
- PRODUCTION
- ENGAGEMENT MANAGEMENT
- PARTY MANAGEMENT
- CORE COMMERCE MANAGEMENT
- INTELLIGENCE MANAGEMENT
- OAV REALISATION
- USE CASES AND EXAMPLES
- ARCHITECTURE

Functional Blocks in the TM Forum OPEN DIGITAL ARCHITECTURE (ODA)



AI first steps GN5-1

- Started in GN5-1 (31-1-2024) to define the Intelligence Management section of the Network Automation eAcademy metro map:
 - Units added to Intelligence Management line
 - Already decided on a two-phase approach with initial focus on introductory units.
- Dormant after defining the units.
- Also Incubator Project: Chatbot for training.

AI Focus Group (GN5-2)

- We had already made the “Intelligence Management” line longer to include more units.
- The interest around AI-relevant topics is increasing.
- We are detaching the AI section of the Network Automation map (part of Intelligence Management).
- New Metro Map, with two introductory paths:
 - To understand how AI Works (Introduction to AI)
 - To use AI to manage the Network (AI use case): We follow the FCAPS Framework (Fault, Configuration, Accounting, Performance, and Security)

Network Automation eAcademy

Legend

- Unit
- Document / ext. link
- Released / ● Not released

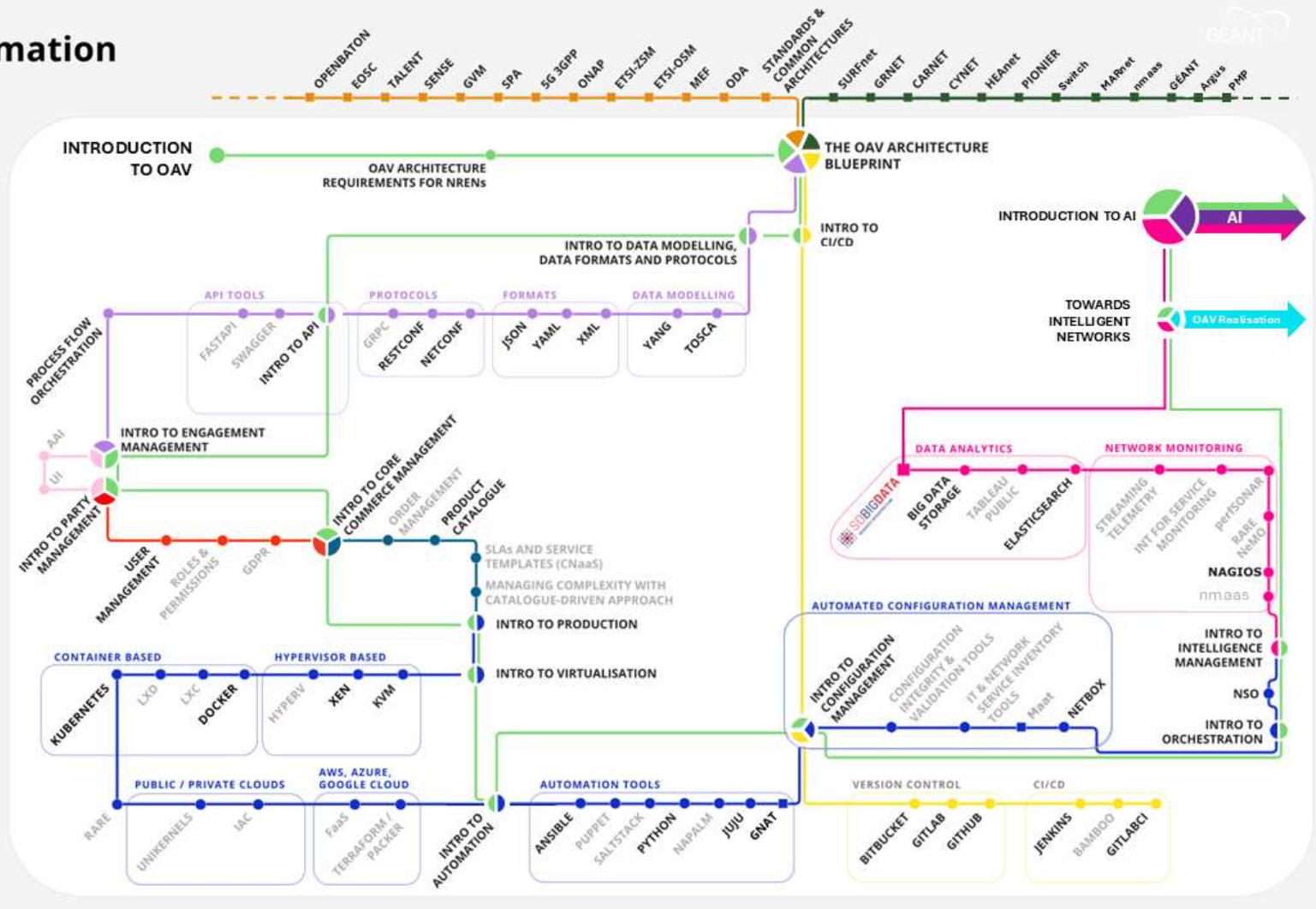
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Tracks

- GENERAL INTRODUCTION
- AGILE, DevOps, CI/CD
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Functional Blocks in the TM Forum OPEN DIGITAL ARCHITECTURE (ODA)



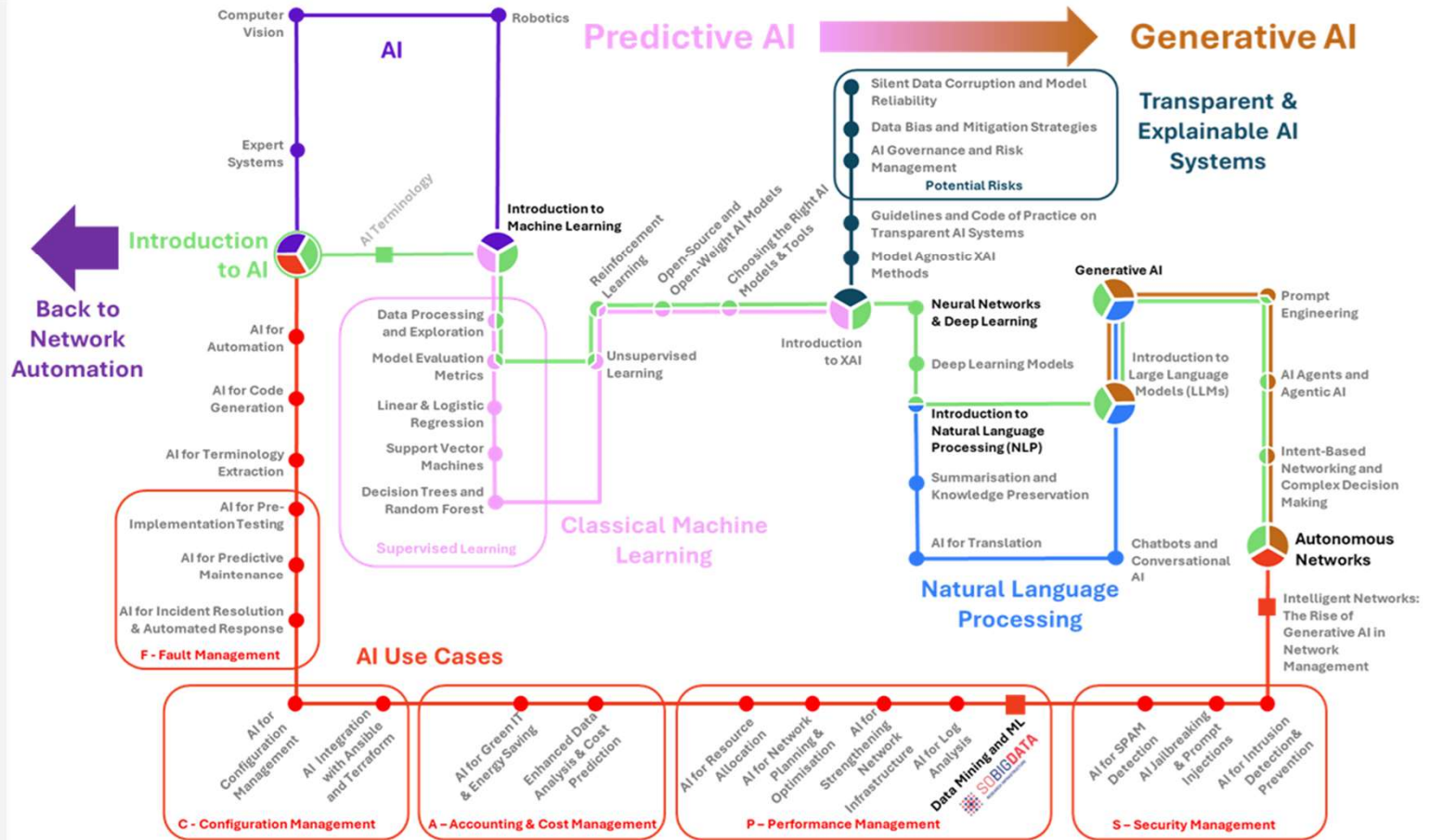
Artificial Intelligence eAcademy

Legend

- Unit
- Document/ External Link
- Released
- Not Released
- Exchange Point

Tracks

- Introduction to AI
- Classical Machine Learning
- AI Use Cases
- Natural Language Processing
- AI
- Transparent & Explainable AI Systems
- Generative AI

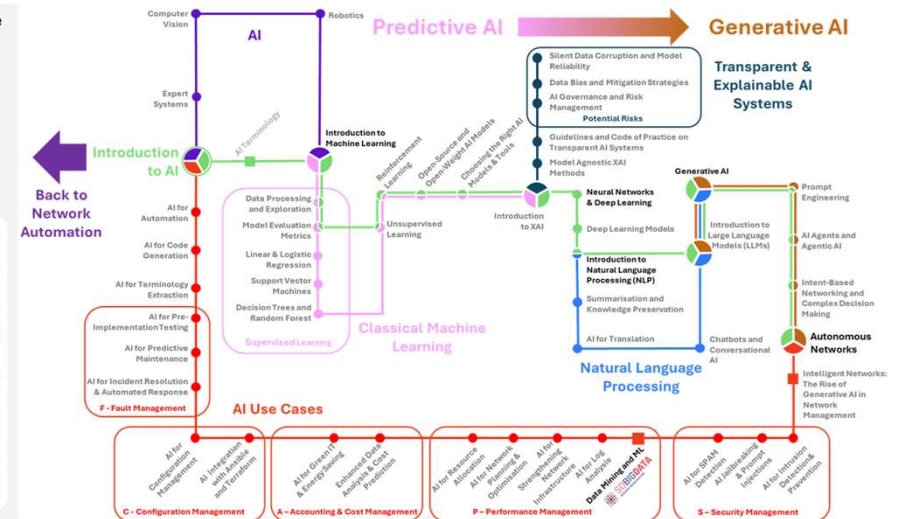
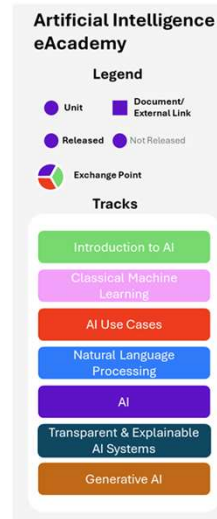


Published Units

- [Introduction to Artificial Intelligence](#) (75')
- [Neural Networks & Deep Learning](#) (2h)
- [Unsupervised Learning](#) (90')
- [Data Mining & Machine Learning](#) (SoBigData Academy)
- [Intelligent Networks: The Rise of Generative AI in Network Management](#) (document)
- [SoBigData Academy](#)

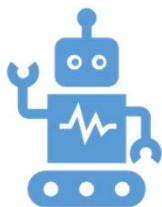
Coming soon

- Data Processing and Exploration
- Reinforcement Learning
- Linear and Logistic Regression
- Introduction to XAI
- Model Evaluation Metrics



Terminology: AI/ML tools to the rescue!

Usage of AI/ML tools to help on the Terminology and Abbreviations documents.



AI/ML Tools

AI-assisted frequency cleanup (LLMs).
Abbreviation extractor: AgenticAbbreviationExtractor.
Terminology extraction: TermXT.
POS tagging & lemmatization: TermSuite components.
LLMs like ChatGPT, Lama and Gemini.



Word-frequency Analysis Tools

Reddit thread
MAXQDA guide
Voyant Tools
Quick online counter
Stop-word primer

What Can You Do?

- Follow the training tracks:
<https://wiki.geant.org/spaces/NETDEV/pages/870744119/Network+eAcademy+Training+Portal>
- Map your Architecture. Templates and examples here:
<https://wiki.geant.org/spaces/NETDEV/pages/362742030/Mapping+Use+Cases>
- Do a self-assessment through the OAV Maturity Model:
<https://wiki.geant.org/spaces/NETDEV/pages/543752253/OAV+Maturity+Model>
- Send us your examples for the Community Portal:
<https://wiki.geant.org/spaces/NETDEV/pages/212303927/OAV+Community+Portal>
- See the Terminology and Glossary:
<https://wiki.geant.org/spaces/NETDEV/pages/212303919/OAV+Terminology>
- Subscribe to the mailing list for the GNA-G Network eAcademy Working Group at
<https://lists.gna-g.net/postorius/lists/network-eacademy-wg.lists.gna-g.net/>
- Contact us to share your ideas/suggestions: network-eacademy@lists.geant.org



Thank You!

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Co-funded by
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