



3IA Côte d'Azur AI PROGRAMS



THE INSTITUTE

3IA Côte d'Azur is one of the four "Interdisciplinary Institutes for Artificial Intelligence" that were created in France in 2019.

Its ambition is to create an innovative ecosystem that is influential at the local, national and international level. The 3IA Côte d'Azur Institute is led by Université Côte d'Azur in partnership with major higher educational and research partners in the region of Nice and Sophia Antipolis: CNRS, Inria, INSERM, EURECOM and SKEMA Business School. The 3IA Côte d'Azur Institute is also supported by ECA, Nice University Hospital Center (CHU Nice), CSTB, CNES, Data Science Tech Institute and INRAE. The project has also secured the support of more than 62 companies and start-ups.

3IA Côte d'Azur offers an AI label that recognizes education programs with a strong AI component. The goal of this label is to certify a content of excellence and connect companies looking for AI profiles. Thanks to the 3IA Côte d'Azur Education Label, the certified programs gain greater visibility and increased recognition by the Institute's partners, as well as international students.



AI PROGRAMS

Core AI

Master of Science (MSc)

MSc Data Science & Artificial Intelligence.....	4
MSc Data Science & Artificial Intelligence.....	4
MSc Data Analytics.....	4
MSc Data Engineering for Artificial Intelligence.....	5

Master

Master HPC-AI - High Performance Computing & AI for Industry.....	5
Master Computer Science applied to Business Management - AI track.....	5
Master Data Science.....	6
Master Internet of Things.....	6
Master Intelligent Communication Systems.....	6
Master Computer Science.....	7

Engineer

Master Engineer Applied Mathematics & Modelisation - Data Science.....	7
Master Engineer Applied Mathematics / Digital Engineering.....	7

Bachelor

Bachelor Sciences and Technology: Artificial Intelligence.....	8
--	---

Minor

Minor AI: Introduction to Machine Learning.....	8
Minor AI: Introduction to Deep Learning.....	8
Minor AI and Data Engineering.....	9

Summer program

Deep Learning School.....	9
---------------------------	---

Certificate program

CentraleDigitalLab @LaPlateforme.....	9
---------------------------------------	---

AI & Law

Master

Master Algorithmic Law and Data Governance.....	10
Master Banking Law and Fintech.....	10
Master Banking Cyber Security.....	10

AI & Health

Master of Science (MSc)

Master of Science Modelling for Neuronal and Cognitive Systems.....	11
---	----

University degree

University degree AI & Health.....	11
------------------------------------	----

Core AI

Master of Science (MSc)



DATA SCIENCE AND ARTIFICIAL INTELLIGENCE

Become a specialist in mathematical techniques and computer tools for extraction of knowledge from big data

- > **Key words:** Artificial intelligence, Data science, Machine learning, System Management, Statistics
- > **Future careers:** Data analyst, Chief data Officer, Machine learning engineer, Big data engineer, Big data architect
- > **Partners:** Amadeus, Thalès, CNRS, Inria, Inserm, Mines ParisTech, SKEMA Business School
- > **Language of instruction:** English
- > **Initial and continuing training**



DATA SCIENCE & ARTIFICIAL INTELLIGENCE

Get a deep understanding of the main scientific grounds for artificial intelligence techniques

- > **Key words:** Artificial intelligence, Data science, Machine learning, Big Data architectures
- > **Future careers:** Data Scientist, Data analyst, Artificial Intelligence Engineer
- > **Language of instruction:** English
- > **Initial / continuing training and apprenticeship**



DATA ANALYTICS

Increase your business skills and job opportunities by strengthening decision-making through data analysis

- > **Key words:** Machine Learning, Software management, Databases, Big Data
- > **Future careers:** Data Scientist, Data analyst
- > **Language of instruction:** English
- > **Initial / continuing training and apprenticeship**





DATA ENGINEERING FOR ARTIFICIAL INTELLIGENCE

Explore the world of Big Data and build data infrastructures

- > **Key words:** Artificial intelligence, Data science, Machine learning, System Management, Statistics
- > **Future careers:** Data analyst, Chief data Officer, Machine learning engineer, Big data engineer, Big data architect
- > **Partners:** Amadeus, Thalès, CNRS, Inria, Inserm, Mines ParisTech, SKEMA Business School
- > **Language of instruction:** English
- > **Initial / continuing training and apprenticeship**

Master



HPC-AI - HIGH PERFORMANCE COMPUTING AND ARTIFICIAL INTELLIGENCE FOR INDUSTRY

Become an expert in high performance computing, massive data analysis and machine learning

- > **Key words:** Artificial intelligence, Data science, Machine learning, Big Data architectures
- > **Future careers:** Data Scientist, Data analyst, Artificial Intelligence Engineer
- > **Language of instruction:** English
- > **Initial and continuing training**



COMPUTER SCIENCE APPLIED TO BUSINESS MANAGEMENT - AI TRACK

Learn how to solve business problems with artificial intelligence techniques

- > **Key words:** Information System, Business Intelligence, Mathematics, Web, Project Management, Big Data
- > **Future careers:** R&D engineer in artificial intelligence project, Junior project manager, Functional manager
- > **Partners:** Atos, Air France, Thales, Amadeus, SAP, Capgemini, Orange, Altran, PRO BTP
- > **Language of instruction:** French
- > **Initial / continuing training and apprenticeship**



DATA SCIENCE

Develop cutting-edge and fundamental tools to efficiently address data processing problems

- > **Key words:** Big Data, Data Science, Machine Learning, Data Mining, Deep Learning, Business Intelligence
- > **Future careers:** Data Scientist, Big Data Architect, Research and development engineer, Product manager for Big Data solutions, Business Intelligence Analyst
- > **Partners:** BMW Group, IABG, Orange, Monaco Telecom, SAP, Symantec
- > **Language of instruction:** English
- > **Initial and continuing training**



INTERNET OF THINGS

Design and develop IoT applications and services adapted to industrial needs

- > **Key words:** Sensors, Actuators, Low-energy communication, Data Semantic, Machine Learning, Security, Business Intelligence
- > **Future careers:** IoT Consultant, IoT developer, IoT Innovation Manager, IoT Solution Architect, IoT Project Manager, Data Scientist
- > **Partners:** ORANGE, SYMANTEC, SAP, Monaco Telecom, BMW Group Research & Technology, IABG
- > **Language of instruction:** English
- > **Initial and continuing training**



INTELLIGENT COMMUNICATION SYSTEMS

Develop cutting-edge and fundamental tools to efficiently address data processing problems

- > **Key words:** Wireless communication and computing, Mobile communication Systems, Mobile Applications and Services, Telecommunications
- > **Future careers:** Data Scientist, Big Data Architect, R&D engineer, Product manager for Big Data solutions, Business Intelligence Analyst
- > **Partners:** BMW Group, IABG, Orange, Monaco Telecom, SAP, Symantec
- > **Language of instruction:** English
- > **Initial and continuing training**



UNIVERSITÉ CÔTE D'AZUR

COMPUTER SCIENCE

Master the latest computer concepts and tools and anticipate future technological developments

- > **Key words:** Digital sciences, Innovation, Data science, Software engineering, Programming
- > **Future careers:** Software engineer, R&D engineer, Data scientist, Data engineer, Embedded applications developer, Web Designer
- > **Partners:** Amadeus, AirFrance, Atos, Virbac, Hp, Orange, Software Lab- Groupe Renault, SAP, Thalès
- > **Language of instruction:** French and English
- > **Initial / continuing training and apprenticeship**

Engineer



UNIVERSITÉ CÔTE D'AZUR

APPLIED MATHEMATICS AND MODELISATION - DATA SCIENCE

Become versatile, high-level engineers capable of modeling and solving business problems

- > **Key words:** Big data, Data science, Statistics, Machine learning, Stochastic modeling
- > **Future careers:** Engineer in the fields of finance, marketing, environment, biology, medical and pharmaceutical industry, transport, energy, insurance
- > **Partners:** FormaSup CFA Epure-Méditerranée (Marseille)
- > **Language of instruction:** English
- > **Initial and continuing training**



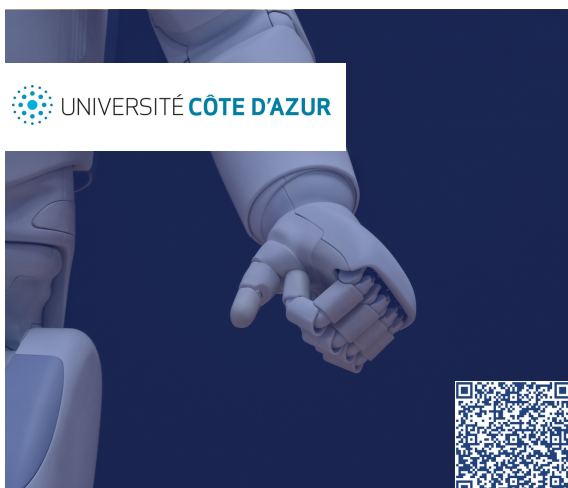
UNIVERSITÉ CÔTE D'AZUR

APPLIED MATHEMATICS / DIGITAL ENGINEERING

Become a specialist in mathematical techniques and computer tools for extraction of knowledge from big data

- > **Key words:** Problem analysis, Programming, Innovative solutions, Mathematical tools
- > **Future careers:** High-tech industries (aeronautics, space, automotive), Large IT groups (data science, big data), Financial institutions (banks, insurance)
- > **Partners:** FormaSup CFA Epure-Méditerranée (Marseille)
- > **Language of instruction:** English
- > **Initial and continuing training**

Bachelor



SCIENCES AND TECHNOLOGY: ARTIFICIAL INTELLIGENCE

Acquire an important background knowledge on the fundamental concepts of artificial intelligence

- > **Key words:** Databases, Algorithms, Intelligent systems, AI introduction, Mathematical methods
- > **Future careers:** Data analyst, Computer developer, Developer of AI-based solutions
- > **Partners:** Doriane, Silex
- > **Language of instruction:** French
- > **Initial and continuing training**

Minor



ARTIFICIAL INTELLIGENCE: INTRODUCTION TO MACHINE LEARNING

Learn the principles of Machine Learning and know how to use its tools to analyze data

- > **Key words:** Data analysis, Machine Learning, Classification, Algorithms
- > **Learning outcome:** At the end of the course, students should be able to deal with basic problems in particular in the context of regression, classification, clustering or dimensionality reduction. They must also be able to explain the main differences between these different algorithms.
- > **Language of instruction:** English
- > **Initial and continuing training**



ARTIFICIAL INTELLIGENCE: INTRODUCTION TO DEEP LEARNING

Learn the principles of Deep Learning

- > **Key words:** Deep Learning, Data, Modeling, Neural network, Explainability
- > **Learning outcome:** At the end of the course, students should master the principles of Deep Learning (neural network) and know how to build models based on neural networks to process structured data, images or text.
- > **Language of instruction:** English
- > **Initial and continuing training**



ARTIFICIAL INTELLIGENCE AND DATA ENGINEERING

Master the most advanced techniques in Computer Science

- > **Key words:** Semantic Web, Machine Learning, Deep Learning, Web of data
- > **Future careers:** Research engineers, Software designers and Project managers
- > **Language of instruction:** English
- > **Initial / continuing training and apprenticeship**

Summer program



DEEP LEARNING SCHOOL

If you are a researcher, an engineer, a PhD student, a master student, working in tech companies or in academic labs, this school is made for you!

- > The Deep Learning School aims to train engineers, technicians, and researchers. This Summer School is supervised by international experts and is divided by lectures and labs.
- > **Partners:** Digital School for Humans (DS4H), AI4media, Agence Nationale de Recherche (ANR)
- > **Language of instruction:** English

Certificate program



CENTRALE DIGITAL LAB @LAPLATEFORME_

Focus on IT and digital business transformation

- > **Key words:** Machine Learning, Data science, Deep Learning, Fast prototyping, Agile methods
- > This training is aimed at digital and programming enthusiasts who wish to develop their skills in the context of corporate tech projects carried out in teams.
- > **Partners:** Azerion, Felix, Viaxoft, NGE, Orange, Postlab, Groupe ADF
- > **Language of instruction:** French and English
- > **Initial and continuing training**

Master



ALGORITHMIC LAW AND DATA GOVERNANCE

Become the lawyer of tomorrow who masters all technological issues

- > **Key words:** Data protection, Legal Tech, Deep tech, Cyber-risk, Data governance, Predictive justice
- > **Future careers:** Legal defense and advice, Management and business engineering, Consulting
- > **Partners:** GREDEG, DL4T
- > **Language of teaching:** French
- > **Initial / continuing training and apprenticeship**



BANKING LAW AND FINTECH

Address tomorrow's banking and financial challenges with innovative and forward-thinking skills

- > **Key words:** Fintech and trading, AssurTech, Data governance, Financial analysis, Insurance law
- > **Future careers:** Defense and legal advice, Financial asset management, Treasury and financing, Consumer protection and trade control
- > **Partners:** GREDEG, DL4T
- > **Language of teaching:** French
- > **Initial / continuing training and apprenticeship**



CYBER SECURITY

Address tomorrow's banking and financial challenges with innovative and forward-thinking skills

- > **Key words:** Cloud computing, Mobile systems, Malware analysis, Secure communications, Mitigation techniques, Operating system security
- > **Future careers:** Cybersecurity consultant, Security analyst, Information security architect, Cybersecurity specialist, Computer forensics expert
- > **Partners:** BMW Group, IABG, Orange, Monaco Telecom, SAP, Symantec
- > **Language of teaching:** English
- > **Initial and continuing training**



AI & Health

Master of Science (MSc)



MODELLING FOR NEURONAL AND COGNITIVE SYSTEMS

Use neuronal modeling to explore the interface of applied mathematics and cognitive sciences

- > **Key words:** Neurocognition, Behavioral and cognitive neuroscience, Data science, Statistical analysis
- > **Future careers:** Researcher in private or public institutions, Research engineer/associate, Neuroscientist
- > **Partners:** NeuroMod, CHU de Nice, Laboratoire d'Innovation et Numérique pour l'Education (LINE), Inria
- > **Language of teaching:** English
- > **Initial and continuing training**

This program is supported by the Initiative of Excellence UCA JEDI.

University degree



ARTIFICIAL INTELLIGENCE & HEALTH

Initiate and develop artificial intelligence projects using medical Big Data

- > **Key words:** Health data, Core AI, Innovation, Statistical analysis
- > This diploma is intended for health professionals, interns, biomedical engineers and researchers in the health field who wish to initiate and develop artificial intelligence projects using medical Big Data.
- > **Partners:** Inria, CHU Nice, Centre Antoine Lacassagne, Imperial College London, ClusterIA, Lito
- > **Language of teaching:** French
- > **Initial and continuing training**



UNIVERSITÉ
CÔTE D'AZUR

INSTITUT INTERDISCIPLINAIRE
D'INTELLIGENCE ARTIFICIELLE
3IA CÔTE D'AZUR



@3IAcotedazur



@3IA Côte d'Azur



3IA Côte d'Azur

GET IN TOUCH

Université Côte d'Azur
28, avenue de Valrose - 06100 Nice

3IA.training@univ-cotedazur.fr

<https://3ia.univ-cotedazur.eu/>