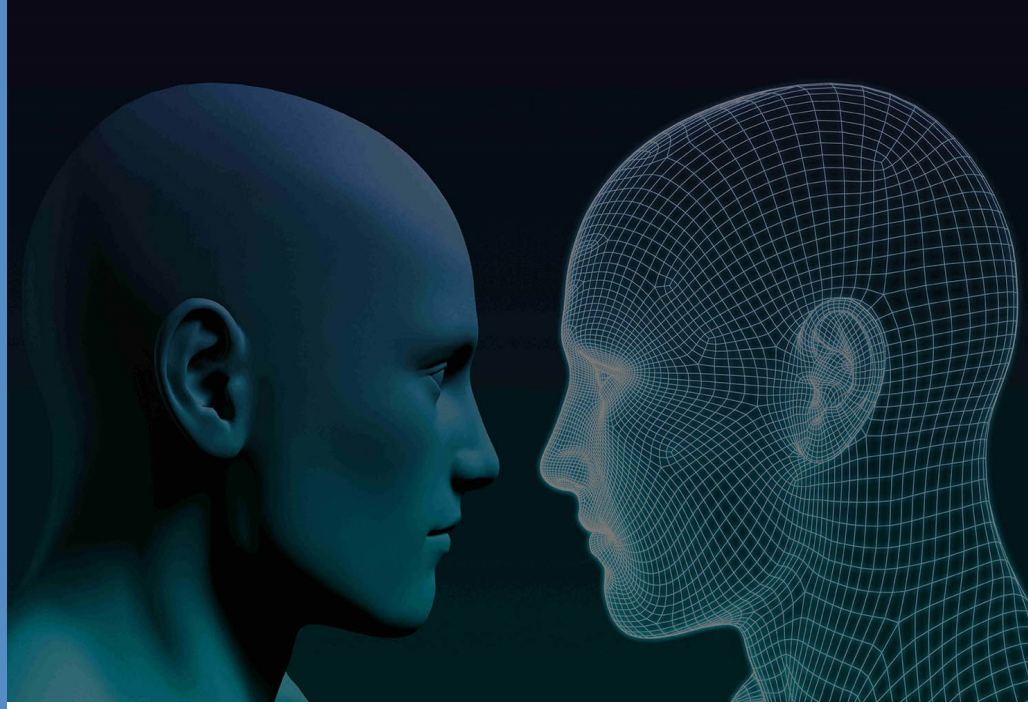
MAI&DL

Master in **Artificial Intelligence** and **Deep Learning**

10 MONTHS ● ONLINE ● APRIL



Universidad de Alcalá

Venue

ONLINE

Schedule

April 2020 - March 2021

Tuition Fee

5.900 €

Specialize in **ARTIFICIAL INTELLIGENCE** & **DEEP LEARNING**. **DO YOU ACCEPT THE CHALLENGE?**

The Master in Artificial Intelligence and Deep Learning provides the tools to understand how Machine Intelligence works as well as to put into perspective the impact of artificial sensing, cognition and action in areas such as Finance, Medicine of Arts. The **objetives of the Master in Artificial Intelligence and Deep Learning** consist on:

- Understanding the formal foundations of Machine Learning and its implications in human-machine interactions.
- Learning how to use high level languages in order to develop real applications based on AI as well as understanding the problems in implementing such applications in practice.
- Guiding the proposal of AI-based solutions, considering the ethical and legal aspects and the economic and social implications.

The master is offered in **online mode**.

WHAT DO WE OFFER?

- Our Master in Artificial Intelligence and Deep Learning allows you to make your training **COMPATIBLE WITH YOUR WORK** thanks to an innovative learning methodology.
- A **SOUND PREPARATION** for a total of 60 ECTS credits, which allows to cover in depth all the concepts and applications.
- A **METHODOLOGY** focussed on practice and context, using cases, real situations and technological tools that allow you to learn from the beginning.
- An **UPDATED CURRICULUM**, which ensures that our students are obtaining the latest knowledge in line with the trends and demands of Society.
- We have arranged a team of **OUTSTANDING PROFESSORS** with hands-on experience in the design of Artificial Intelligence and Deep Learning Systems.
- Study your program at the **UNIVERSITY OF ALCALA**, one of the best Universities in Europe.

PROGRAMME

Programing in Python

- Arrays, matrices and vectors.
- Graphics.
- Program flow management.
- Interfaces and data loading.
- Programming exercises.

Artificial Intelligence and Machine Learning

- History and Evolution of Artificial Intelligence.
- Supervised, unsupervised and reinforced Learning.
- Symbolic and sub-symbolic learning.
- Classification and Regression Models.
- Model Optimization.

FeedFordward Networks

- Feed-Forward single-layer networks.
- Multilayer Networks.
- Backpropagation Algorithm.
- Loss functions.
- Hyper-parameters and learning strategies.

Genetic Algorithms and Evolutionary Computation

- Search and Optimization.
- Coding.
- Genetic Algorithms.
- Evolutionary Strategies.
- Swarm Models.

Unsupervised and Reinforced Learning

- Clustering and Classification.
- K-Mean type Algorithms.
- NN-type algorithms.
- Tree Algorithms.
- Reinforcement learning.

Convolutional and Sequential Networks

- Fundamentals and structure of convolutional networks.
- Residual networks.
- Sequential and time series problems.
- Recurrent networks.
- Backpropagation through time.
- LSTM models.

Augmented Intelligence and Human Machine Interaction

- Cognitive Theories.
- Interaction design.
- Robot ethics.
- Augmentation technologies.

Seminars

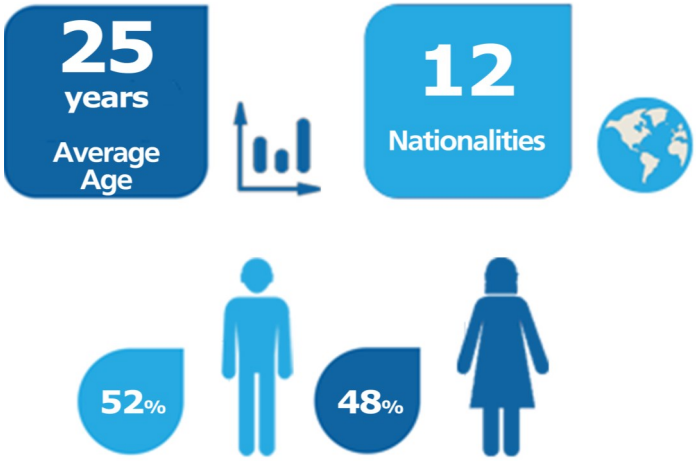
- Seminars on applications of Deep Learning to the fields of medicine, finance, automotive driving, computer vision, speech recognition and others.

MASTER'S THESIS

PARTICIPANT PROFILE

The **Master in Artificial Intelligence and Deep Learning** targets both professionals and young graduates interested on understanding the foundations and implications of Artificial Intelligence and Deep Learning in Business, Art and Society.

The profile of candidates that can apply is: young graduates in engineering, medicine, social sciences or professionals with a graduate degree.



+ Information

Request further information and start your admission process by contacting our Admissions Department:

masterai@uah.es
www.master-artificialintelligence.com