



## Facultatea de Automatică și Calculatoare

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# Master's Degree Program Machine Learning

## General Information

Requirements: Bachelor's degree; foundations of Computer and Information Technology  
Duration: 4 semesters (3 semesters coursework + 1 semester Dissertation thesis)  
ECTS credits: 120  
Program language: English  
More information: <https://cs.upt.ro/education/master>

## Competencies and Knowledge Acquired

- Advanced knowledge of the main topics and problems in the field of machine learning
- Knowledge of current technologies and abilities to select and apply them in the development of machine learning projects
- Skills to critically analyze, innovate, and research
- Advanced abilities of communication, interdisciplinary cooperation, and team project management

## Curriculum

The curriculum is simple and flexible. It is structured into three components:

- **Core component** – each semester, at least 2 courses must be elected out of the following:
  - Semester 1: *Fundamentals of Machine Learning, Optimization in Machine Learning, Deep Learning, Fundamentals of Computer Vision, Big Data Analytics*
  - Semester 2: *Natural Language Processing, Probabilistic Graphical Models, Reinforcement Learning, Computer Vision, Big Data Visualization*
  - Semester 3: *Robotics, Text Mining and Recommender Systems, Autonomous Driving, Advanced Computer Vision, Big Data in Health and Bioinformatics*
- **Elective component** – each semester, 1 course must be elected out of the course list of *any Master program in the field of Computer and Information Technology*
- **Research component** – develops the research skills of the Master student over the four semesters of the program. It contains courses and activities directly related to research and Master Thesis development

## Why Master of Machine Learning

- AI systems are increasingly present in all aspects of everyday life, from household items, automobiles, computer games, mobile applications, to the activities we carry out at work
- Become a highly qualified specialist in Machine Learning
- Master the most recent deep learning and big data technologies
- Specialty of high demand at national and international level
- Stand out from the crowd – in a highly competitive field, any edge counts!
- Learn new concepts in one of the most important engineering fields
- First step in a possible research career

## Benefits and Opportunities

- Machine Learning jobs are among the highest paid and have the highest job satisfaction
- Up-to-date and flexible curriculum – choose your own path
- Well equipped laboratories, good infrastructure, latest technologies

## Contact

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