Co-funded by the European Union
ΕΣΠΑ 2021-2027
Human Resources and Social Cohesion Programme

The project "Support for Internationalization Actions of Foreign Language Speaker Postgraduate Studies of the National Technical University of Athens" (MIS 6004804) is co-financed by the European Union through the Operational Programme "Human Resources and Social Cohesion"

NATIONAL TECHNICAL UNIVERSITY OF ATHENS
GRADUATE STUDIES PROGRAM "GEOINFORMATICS"

Course: " COMPUTATIONAL METHODS IN GEOINFORMATICS"
GEO 6605
Lecture by Professor Argialas Demetre

Subject: REPRESENTATION OF KNOWLEDGE BASES

You are asked to research and write a short technical report on one of the following topics or an application of them in relation to GEOINFORMATION

1. Knowledge based expert systems
2. Knowledge based systems
3. Expert systems
4. Knowledge bases – rule bases
5. Artificial intelligence in geoinformatics
6. Computer vision expert systems
7. OBIA-(Object Based Image Analysis) knowledge-bases

To complete the assignment you will use relevant books, journals, and the Internet with search engines as well as ScienceDirect.

The length of the presentation should be approximately 25-35 ppt slides. The technical report must state the specific problem, its importance and how to solve it. Particularly

- To model which phenomenon and why
- How Conceptual Modeling was done
- What does this particular knowledge base representation consist of.
- Present the specific knowledge base representation, and its programming
- In what language-environment took place? With what specific rule structures, etc...
- Provide many examples -- virtual, diagrammatic, with code -- for each case that clearly demonstrate the entire methodology and its utility.
- Application examples
- Conclusions – epilogue

The structure of the technical report shall be as follows:
Title, Abstract, Contents, Introduction, Methodology, Results, Conclusions.

The topic (in powerpoint and PDF format) will be delivered together with the studied pdf file. You files must be named as:

1. lastname-firstname-original-paper.pdf (e.g. argialas-demetre-original-paper.pdf)
2. lastname-firstname-presentation.ppt(x) η odp (e.g. argialas-demetre-presentation.ppt) και
3. lastname-firstname-presentation.pdf (e.g. argialas-demetre-presentation.pdf)

Delivery date as stated on HELIOS platform
All topics have strict deadlines (locks the system) and are submitted ONLY digitally and ONLY at https://helios.ntua.gr.
The topic will be presented during the assessment period