




5.00 credits

30.0 h

Q2

Teacher(s)	Vande Kerckhove Corentin ;
Language :	English
Place of the course	Mons
Main themes	<p>The main topics of this course are:</p> <ul style="list-style-type: none"> <li>• Main currents in recommendation                             <ul style="list-style-type: none"> <li>• Collaborative recommendation</li> <li>• Content-Based Recommendation</li> <li>• Knowledge-based recommendation</li> </ul> </li> <li>• Main techniques and main models in recommendation                             <ul style="list-style-type: none"> <li>• Nearest neighbors model</li> <li>• Latent class model</li> <li>• Models based on dimensionality reduction and decompositions matrix (for example, nonnegative matrix factorization)</li> <li>• etc</li> </ul> </li> </ul>
Learning outcomes	<p><b>At the end of this learning unit, the student is able to :</b></p> <ul style="list-style-type: none"> <li>• Understand the main currents supporting recommender systems;</li> <li>• Understand and describe the main techniques and models used in recommender systems;</li> <li>1 • Apply, on real data, different recommendation techniques, and compare the quality of the results obtained by applying these techniques;</li> <li>• Analyze and interpret the results provided by the application of recommendation techniques.</li> </ul>
Evaluation methods	<p>Continuous evaluation Project with oral defense</p> <p>!!! The course consists in a unique evaluation (that is, one a mark has been obtained for the course, it holds for the entire academic year, and can NOT been improved later on) !!!</p> <p><i>By submitting work for evaluation, you affirm: (i) that it accurately reflects the phenomenon under study, and for this, you must have verified the facts, especially if they are claimed by a generative AI (which you must explicitly mention as a tool used to support your work); (ii) that you have complied with all specific requirements of the task entrusted to you, including requirements for transparency and documentation of the scientific approach implemented. If either of these statements is not true, whether intentionally or due to negligence, you are in violation of your ethical commitment to the knowledge produced in the context of your work, and potentially other aspects of academic integrity, which constitutes an academic offense and will be treated as such.</i></p>
Teaching methods	<p>Lectures Practical assignments, exercises and projects integrated into the course The lecture is given in English.</p>
Content	<p>Nowadays, recommender systems play an ever more important role to propose products or services to consumers. Recommending movies, music, news, books, restaurants, financial services, search terms, or contacts, etc. has become a key asset for many companies. Recommender systems can be based on numerous approaches in existence today. This course covers some of these systems with a focus on recommender systems data, collaborative filtering, matrix factorization, and the evaluation of recommender systems.</p>
Inline resources	<p>Online ressources are available on Moodle Lecture name : MLSMM2156 - Systèmes de recommandation Key : communicated at the first class Brief introduction: <a href="https://tryolabs.com/blog/introduction-to-recommender-systems/">https://tryolabs.com/blog/introduction-to-recommender-systems/</a> General overview: <a href="https://link.springer.com/book/10.1007%2F978-3-319-29659-3">https://link.springer.com/book/10.1007%2F978-3-319-29659-3</a></p>
Bibliography	<p>Aggarwal, Charu C.. "Recommender Systems." Springer International Publishing (2016).</p>

Faculty or entity in charge	CLSM
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Programmes containing this learning unit (UE)				
Program title	Acronym	Credits	Prerequisite	Learning outcomes
Master [120] in Data Science : Statistic	DATS2M	5		
Master [120] : Business Engineering	INGE2M	5		
Master [120] : Business Engineering	INGM2M	5		
Master [120] in Management (with work-linked-training)	GESA2M	5		