UCLouvain

lactu2310

2025

Statistical learning methods for insurance

3.00 credits	15.0 h	Q2

Teacher(s)	Barigou Karim ;
Language :	English > French-friendly
Place of the course	Louvain-la-Neuve
Prerequisites	Knowledge of English at the level of the LANGL1330 course. LACTU2150 Analyse statistique des données d'assurance
Main themes	Classification and regression trees for claim propension, claim counts, claim severities and claim duration. Ensemble methods: Bagging, Random forests, Boosting. Applications to risk classification.
Learning outcomes	
Evaluation methods	Assessment is based on an individual report in which the methods covered during the lectures are applied to a real dataset. The report will be defended orally.
Teaching methods	The course consists of theoretical lessons illustrated with numerous practical cases in which students are required to participate.
Content	Classification and regression trees for claim propension, claim counts, claim severities and claim duration. Ensemble methods: Bagging, Random forests, Boosting. Applications to risk classification
Inline resources	Moodle website
Bibliography	Denuit, M., Hainaut, D., Trufin, J. (2020). Effective Statistical Learning Methods for Actuaries. Volume 2: Tree-Based Methods. Springer Actuarial Lecture Notes Series.
Faculty or entity in charge	LSBA

Programmes containing this learning unit (UE)

Program title	Acronym	Credits	Prerequisite	Learning outcomes
Master [120] in Data Science : Statistic	DATS2M	3		🔍
Master [120] in Actuarial Science	ACTU2M	3		🔍