

VARIABLES LIST: PREDICTIVE MODEL SELECTION FOR COMPLETION RATE IN MASSIVE OPEN ONLINE COURSES  
A. DE SANTIS, K. SANNICANDRO, C. BELLINI, T. MINERVA - UNIVERSITY OF MODENA AND REGGIO EMILIA

VARIABLE	GROUP	NAME	DESCRIPTION	TYPE	SCALE	RANGE/VALUES	No.	MODE	MEDIAN	MEAN	ST. DV.	DATA COLLECTION	NOTES
INDEPENDENT	User Profile	GENDER	The gender of the user	Qualitative - Categorical (Binary)	Nominal	Man (0) Woman (1)	913	Woman (491 obs.)	-	-	-	SURVEY	
		DEGREE	The highest level degree	Qualitative - Categorical	Nominal	Primary and low secondary education (0) Upper secondary education (1) Undergraduate degree (2) Postgraduate programs (3) Master (4) PhD (5) Other (6)	917	Upper secondary education (343 obs.)	-	-	-	SURVEY	2 + 3 + 4 (513 obs.)
		LANGUAGE	Native language	Qualitative - Categorical (Binary)	Nominal	Italian (0) Other languages (1)	912	Italian (819 obs.)	-	-	-	SURVEY	
		AGE	The age of the user	Qualitative - Ordinal	Ordinal	Less than 20 years (0) From 21 to 25 years (1) From 26 to 30 years (2) From 31 to 35 years (3) From 36 to 40 years (4) From 41 to 45 years (5) From 46 to 50 years (6) From 50 to 60 years (7) More than 60 years (8)	912	From 21 to 25 years (198 obs.)	-	-	-	SURVEY	
		MARRIED	Married or common-law partner	Qualitative - Categorical (Binary)	Nominal	No (0) Yes (1)	888	No (519 obs.)	-	-	-	SURVEY	
		CHILDREN	User has children	Qualitative - Categorical (Binary)	Nominal	No (0) Yes (1)	878	No (609 obs.)	-	-	-	SURVEY	
		TRAINING	Attending an official degree	Qualitative - Categorical	Nominal	Not student (0) Primary/secondary education (1) Undergraduate degree (2) Master (3) Postgraduate program or Specialization (4) PhD (5) Other (6)	895	Not student (350 obs.)	-	-	-	SURVEY	Other (234 obs.)
		WORKING	Working status	Qualitative - Categorical	Nominal	Unemployed (0) Pensioner (1) Permanent employee (2) Entrepreneur (3) Self-employed (4) Fixed-term worker (5) Occasional contractual worker (6) Occasional worker without a contract (7) Other (8)	904	Permanent employee (366 obs.)	-	-	-	SURVEY	Other (118 obs.)
		SECTOR	Working sector	Qualitative - Categorical	Nominal	Employee (0) Entrepreneur (1) Teacher (2) Self-employed (3) Workman (4) Official/Functionary (5) Researcher (6) Doctor (7) Manager (8) Law Enforcement Official (9) Other (10)	825	Other (241 obs.)	-	-	-	SURVEY	Teacher (169 obs.) Employee (164 obs.)
		DIGITAL	Level of digital competences	Qualitative - Ordinal	Likert scale	Min = 1 Max = 5	883	4 (381 obs.)	4.0	3.8	0.9	SURVEY	
	User Engagement	EFFORT	Estimated effort (hours) to complete the course (defined by the user)	Quantitative - Discrete	Likert scale	Min = 2 Max = 288	904	16 hours (268 obs.)	24.0	30.5	35.4	SURVEY	From 8 and 32 hours (681 obs.)
		PRE.KNOWLEDGE	Estimated level of knowledge in the field of the course	Qualitative - Ordinal	Likert scale	Min = 1 Max = 5	907	3 (364 obs.)	3.0	2.9	1.1	SURVEY	
		DROPOUT_TOT	Level of disposition to abandon the course (sum of 9 items)	Quantitative - Discrete	Likert scale	Min = 3 Max = 45	902	27 (94 obs.)	26.0	25.2	7.7	SURVEY	1st Qu = 21 3rd Qu = 30
		DROPOUT_INT	Level of disposition to abandon the course by lack of interactions with instructors/peers (sum of 2 items)	Quantitative - Discrete	Likert scale	Min = 0 Max = 10	902	2 (273 obs.)	4.0	4.1	2.2	SURVEY	4 (154 obs.) 6 (141 obs.)
		DROPOUT_LEA	Level of disposition to abandon the course by lack of learning design (sum of 4 items)	Quantitative - Discrete	Likert scale	Min = 0 Max = 20	902	12 (139 obs.)	12.0	11.5	4.0	SURVEY	1st Qu = 9 3rd Qu = 14
		DROPOUT_NAV	Level of disposition to abandon the course by lack of navigation (sum of 8 items)	Quantitative - Discrete	Likert scale	Min = 0 Max = 10	902	6 (148 obs.)	6.0	5.9	2.6	SURVEY	1st Qu = 4 3rd Qu = 8
		MOTIVATION	Level of motivation to attend the course	Quantitative - Discrete	Likert scale	Min = 1 Max = 40	906	24 (73 obs.)	23.0	22.9	7.0	SURVEY	1st Qu = 18 3rd Qu = 27
	User Behaviour	CLICKS_TRACKED	Rate of clicks on tracked activities	Quantitative - Continuous	Ratio	Min = 0.1 Max = 28.3	921	-	2.9	3.5	3.6	MOODLE REPORT	1st Qu = 0.6 3rd Qu = 5.2
		CLICKS_TOT	Rate of clicks on overall activities	Quantitative - Continuous	Ratio	Min = 0.1 Max = 15.7	921	-	2.0	2.6	2.4	MOODLE REPORT	1st Qu = 0.5 3rd Qu = 4.2
	Course Profile	CTUTORED	Delivery modes	Qualitative - Categorical (Binary)	Nominal	Self-paced (0) Tutored (1)	921	Self-paced (528 obs.)	-	-	-	COURSE PROFILE	
		CCAT	Course category	Qualitative - Categorical (Binary)	Nominal	Sciences (0) Humanities and Social Sciences (1)	921	Humanities and Social Sciences (562 obs.)	-	-	-	COURSE PROFILE	
		CLANG	Course language	Qualitative - Categorical (Binary)	Nominal	Italian (0) English (1)	921	Italian (562 obs.)	-	-	-	COURSE PROFILE	
		CHOUR	Estimated effort (hours) to complete the course (defined by the instructor)	Quantitative - Discrete	Interval	Min = 14 Max = 25	921	14 hours (455 obs.)	16	16.4	3.3	COURSE PROFILE	
		CLEVEL	Difficulty level of the course	Qualitative - Categorical (Binary)	Nominal	Beginner (0) Intermediate/Advanced (1)	921	Beginner (562 obs.)	-	-	-	COURSE PROFILE	
DEPENDENT	Completion	CERTIFICATE	Course completion and certificate download	Qualitative - Categorical (Binary)	Nominal	No (0) Yes (1)	921	No (604 obs.)	-	-	-	MOODLE REPORT	
		CRATE	Rate of the tracked activities completed by the user	Quantitative - Continuous	Ratio	Min = 0 Max = 1	921	1 (343 obs.)	0.5	0.5	0.4	MOODLE REPORT	0 (189 obs.)