

Distribution of 'age' grouped by 'class'

Settings

**Sampling type:** No sampling, test on testing data  
**Target class:** Average over classes

Scores

Method	AUC	CA	F1	Precision	Recall
Random Forest	0.841	0.837	0.826	0.822	0.837
Tree	0.814	0.820	0.818	0.816	0.820
CN2 rule inducer	0.803	0.818	0.815	0.812	0.818
Naive Bayes	0.827	0.784	0.800	0.830	0.784

Figure 1: A decision tree model for predicting the presence of a child in a household. The tree is rooted at the top with a node labeled '1' (red) with a probability of 51.6% and a count of 130/252. The tree branches into two main paths: 'Adolescent' (left) and 'Infant/Toddler' (right). The 'Adolescent' path leads to a node labeled '0' (blue) with a probability of 100% and a count of 117/117. The 'Infant/Toddler' path leads to a node labeled '1' (red) with a probability of 87.0% and a count of 20/23. The tree continues to branch based on various features, with nodes labeled with their predicted class (0 or 1), probability, and count. The final nodes are labeled with their predicted class, probability, and count.

**Features:** A00-A09, A15-A19, A20-A28, A30-A49, A50-A64, A65-A69, A70-A74, A75-A79, A80-A89, A90-A99, B00-B09, B15-B19, B20-B20, B25-B34, B35-B49, B65-B83, B85-B89, B90-B94, B95-B97, C00-C14, C15-C26, C30-C39, C40-C41, C43-C44, C45-C49, C50-C50, C51-C58, C60-C68, C69-C72, C73-C75, C76-C80, C81-C96, D00-D09, D10-D36, D37-D48, D50-D53, D55-D59, D60-D64, D65-D69, D70-D77, D80-D89, E00-E07, E08-E13, E14-E14, E15-E16, E20-E35, E40-E46, E50-E64, E65-E68, E70-E88, E89-E89, F01-F09, F10-F19, F20-F29, F30-F39, F40-F46, F50-F59, F60-F69, F70-F79, F80-F89, F90-F98, G00-G09, G10-G14, G20-G26, G30-G32, G35-G37, G40-G47, G50-G59, G60-G65, G70-G73, G80-G83, G89-G89, H00-H05, H10-H11, H15-H22, H25-H28, H30-H36, H40-H42, H43-H44, H46-H47, H49-H52, H53-H54, H55-H57, H60-H62, H65-H75, H80-H83, H90-H94, H95-H95, I00-I02, I05-I09, I20-I25, I26-I28, I30-I52, I60-I69, I70-I79, I80-I89, I95-I99, J00-J06, J09-J18, J20-J22, J30-J39, J40-J47, J60-J70, J80-J84, J85-J86, J90-J94, J95-J95, J96-J99, K00-K14, ... (total: 243 features)

**Target:** class

**Rule ordering:** ordered  
**Covering algorithm:** exclusive  
**Gamma:** 0.7  
**Evaluation measure:** entropy  
**Beam width:** 5  
**Minimum rule coverage:** 2  
**Maximum rule length:** 5  
**Default alpha:** 1.0  
**Parent alpha:** 1.0

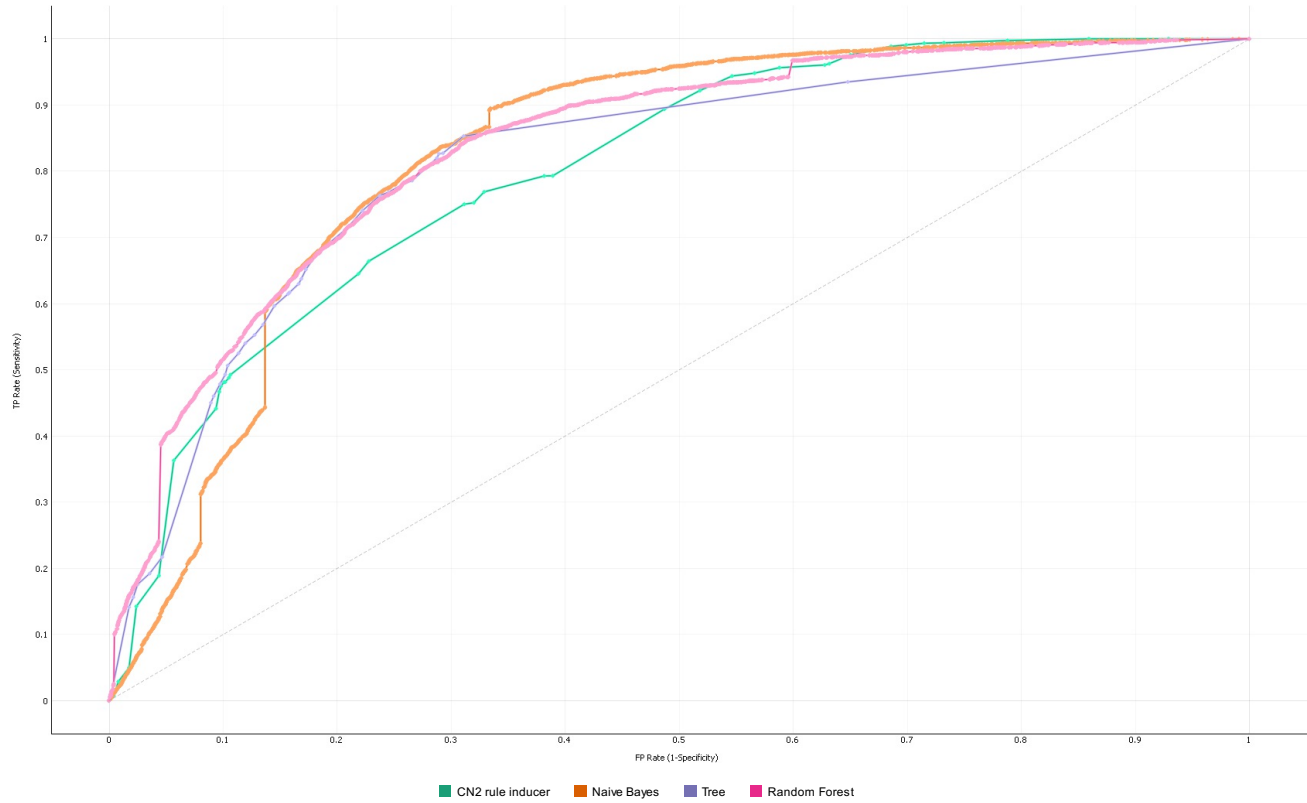
	IF conditions	THEN class	Distribution	Probabilities [%]	Quality	Length
85		B15-B19#0 → class=1	[0, 3]	20 : 80	-0.00	1
110		N10-N16#0 → class=1	[0, 3]	20 : 80	-0.00	1
112		N17-N19#0 → class=1	[0, 3]	20 : 80	-0.00	1
120		H40-H42#0 AND H10-H11#0 → class=1	[0, 2]	25 : 75	-0.00	2
129		J30-J39#0 AND H25-H28#0 → class=1	[0, 2]	25 : 75	-0.00	2
132		J30-J39#0 AND H30-H36#0 → class=1	[0, 2]	25 : 75	-0.00	2
136		J30-J39#0 AND J40-J47#0 → class=1	[0, 2]	25 : 75	-0.00	2
142		H40-H42#0 AND H25-H28#0 → class=1	[0, 3]	20 : 80	-0.00	2
146		K00-K14#0 AND K55-K64#0 → class=1	[0, 2]	25 : 75	-0.00	2
151		K00-K14#0 AND R50-R69#0 → class=1	[0, 2]	25 : 75	-0.00	2
159		M40-M43#0 AND H49-H52#0 → class=1	[0, 3]	20 : 80	-0.00	2
160		N80-N98#0 AND M50-M54#0 → class=1	[0, 2]	25 : 75	-0.00	2
170		G20-G26#0 AND F30-F39#0 → class=1	[0, 4]	17 : 83	-0.00	2
176		A00-A09#0 AND I30-I52#0 → class=1	[0, 2]	25 : 75	-0.00	2
179		H00-H05#0 AND C43-C44#0 → class=1	[0, 2]	25 : 75	-0.00	2
184		S30-S39#0 → class=1	[0, 2]	25 : 75	-0.00	1
186		K90-K95#0 AND K20-K31#0 → class=1	[0, 2]	25 : 75	-0.00	2
187		H80-H83#0 AND M50-M54#0 → class=1	[0, 2]	25 : 75	-0.00	2
189		H00-H05#0 AND H49-H52#0 → class=1	[0, 2]	25 : 75	-0.00	2
199		L80-L99#0 → class=1	[0, 2]	25 : 75	-0.00	1
200		F30-F39#0 AND M15-M19#0 → class=1	[0, 2]	25 : 75	-0.00	2
203		F10-F19#0 AND H60-H62#0 → class=1	[0, 2]	25 : 75	-0.00	2
205		H40-H42#0 AND age#Elder → class=1	[0, 3]	20 : 80	-0.00	2
206		Z00-Z13#0 AND M15-M19#0 → class=1	[0, 2]	25 : 75	-0.00	2
211		H53-H54#0 AND H40-H42#0 → class=1	[0, 2]	25 : 75	-0.00	2
214		H30-H36#0 AND E08-E13#0 → class=1	[0, 2]	25 : 75	-0.00	2
215		H30-H36#0 AND H00-H05#0 → class=1	[0, 3]	20 : 80	-0.00	2
217		B35-B49#0 AND E08-E13#0 → class=1	[0, 3]	20 : 80	-0.00	2
219		I70-I79#0 AND H49-H52#0 → class=1	[0, 6]	12 : 88	-0.00	2
221		N30-N39#0 AND D10-D36#0 → class=1	[0, 2]	25 : 75	-0.00	2
223		Z00-Z13#0 AND E08-E13#0 → class=1	[0, 3]	20 : 80	-0.00	2
227		Z00-Z13#0 AND R10-R19#0 → class=1	[0, 2]	25 : 75	-0.00	2
228		R40-R46#0 AND F40-F48#0 AND H60-H62#0 → class=1	[0, 4]	17 : 83	-0.00	3
231		K90-K95#0 AND K55-K64#0 → class=1	[0, 2]	25 : 75	-0.00	2

233	K40-K46#0 AND I30-I52=0	→ class=1	[0, 2]	25 : 75	-0.00	2
236	S00-S09#0	→ class=1	[0, 2]	25 : 75	-0.00	1
237	Z20-Z29#0 AND age=Elder	→ class=1	[0, 2]	25 : 75	-0.00	2
239	S50-S59#0 AND I20-I25#0	→ class=1	[0, 2]	25 : 75	-0.00	2
241	H00-H05#0 AND age=Middle-aged adult	→ class=1	[0, 2]	25 : 75	-0.00	2
243	I60-I69#0	→ class=1	[0, 2]	25 : 75	-0.00	1
246	K20-K31#0 AND J00-J06#0	→ class=1	[0, 3]	20 : 80	-0.00	2
249	M80-M85#0 AND B35-B49=0	→ class=1	[0, 4]	17 : 83	-0.00	2
252	age=Elder AND M20-M25#0	→ class=1	[0, 3]	20 : 80	-0.00	2
254	age=Elder AND M70-M79#0	→ class=1	[0, 3]	20 : 80	-0.00	2
256	G40-G47#0	→ class=1	[0, 2]	25 : 75	-0.00	1
257	age=Elder AND N30-N39#0	→ class=1	[0, 3]	20 : 80	-0.00	2
259	K20-K31#0 AND J20-J22#0	→ class=1	[0, 3]	20 : 80	-0.00	2
261	R10-R19#0 AND J00-J06#0	→ class=1	[0, 3]	20 : 80	-0.00	2
265	age=Elder AND S50-S59#0	→ class=1	[0, 2]	25 : 75	-0.00	2
268	S60-S69#0	→ class=1	[0, 2]	25 : 75	-0.00	1
270	S80-S89#0	→ class=1	[0, 4]	17 : 83	-0.00	1
272	Z77-Z99#0	→ class=1	[0, 2]	25 : 75	-0.00	1
275	D50-D53#0 AND D10-D36=0	→ class=1	[0, 2]	25 : 75	-0.00	2
276	age=Elder AND I20-I25#0 AND I30-I52=0	→ class=1	[0, 3]	20 : 80	-0.00	3
279	I30-I52#0 AND M15-M19#0	→ class=1	[0, 2]	25 : 75	-0.00	2
281	S90-S99#0	→ class=1	[0, 2]	25 : 75	-0.00	1
283	F40-F48#0 AND J09-J18=0	→ class=1	[0, 2]	25 : 75	-0.00	2
285	M15-M19#0 AND E08-E13#0	→ class=1	[0, 2]	25 : 75	-0.00	2
286	age=Elder AND M15-M19#0	→ class=1	[0, 2]	25 : 75	-0.00	2
287	age=Elder AND N40-N53=0 AND H49-H52#0	→ class=1	[0, 2]	25 : 75	-0.00	3
289	age=Elder AND H90-H94#0 AND H25-H28#0	→ class=1	[0, 3]	20 : 80	-0.00	3
292	age=Elder AND N40-N53=0 AND I30-I52#0 AND N70-N77=0	→ class=1	[0, 5]	14 : 86	-0.00	4
294	I30-I52#0 AND E08-E13=0 AND H65-H75=0	→ class=1	[0, 5]	14 : 86	-0.00	3
296	age=Elder AND N40-N53=0 AND H60-H62=0 AND H90-H94=0 AND M50-M54#0	→ class=1	[0, 2]	25 : 75	-0.00	5
297	age=Elder AND N40-N53=0 AND H60-H62=0 AND H90-H94=0 AND R10-R19#0	→ class=1	[0, 2]	25 : 75	-0.00	5
298	age=Elder AND N40-N53=0 AND H60-H62=0 AND H25-H28=0 AND H90-H94=0	→ class=1	[7, 38]	17 : 83	-0.624	5
299	H80-H83#0	→ class=1	[0, 2]	25 : 75	-0.00	1
301	K55-K64#0 AND H60-H62=0	→ class=1	[0, 3]	20 : 80	-0.00	2
304	K20-K31#0 AND H49-H52#0	→ class=1	[0, 2]	25 : 75	-0.00	2
306	H49-H52#0 AND K80-K87#0	→ class=1	[0, 3]	20 : 80	-0.00	2
308	J09-J18#0 AND E08-E13#0	→ class=1	[0, 2]	25 : 75	-0.00	2
309	K20-K31#0	→ class=1	[1, 5]	25 : 75	-0.650	1
314	age=Middle-aged adult AND N40-N53#0	→ class=1	[0, 3]	20 : 80	-0.00	2
316	J09-J18#0 AND J40-J47#0	→ class=1	[0, 2]	25 : 75	-0.00	2
317	J20-J22#0 AND age=Middle-aged adult	→ class=1	[0, 2]	25 : 75	-0.00	2
320	E08-E13#0 AND E00-E07=0	→ class=1	[0, 3]	20 : 80	-0.00	2
322	K00-K14#0 AND M50-M54#0	→ class=1	[0, 2]	25 : 75	-0.00	2
323	K00-K14#0 AND Z00-Z13=0	→ class=1	[0, 3]	20 : 80	-0.00	2
326	M50-M54#0 AND E70-E88=0	→ class=1	[0, 3]	20 : 80	-0.00	2
328	age=Middle-aged adult AND H60-H62#0	→ class=1	[0, 3]	20 : 80	-0.00	2
329	age=Middle-aged adult AND H90-H94=0 AND J40-J47=0 AND R00-R09=0 AND D10-D36=0	→ class=1	[21, 75]	22 : 78	-0.758	5
330	I80-I89#0	→ class=1	[0, 2]	25 : 75	-0.00	1
335	J40-J47#0	→ class=1	[0, 2]	25 : 75	-0.00	1
337	H90-H94#0 AND E70-E88=0	→ class=1	[1, 2]	40 : 60	-0.918	2
338	age=Middle-aged adult AND R00-R09=0	→ class=1	[1, 2]	40 : 60	-0.918	2
339	age=Elder AND N20-N23=0 AND H25-H28#0	→ class=1	[1, 2]	40 : 60	-0.918	3
340	J09-J18=0 AND R00-R09#0	→ class=1	[2, 3]	43 : 57	-0.971	2
342	age=Elder AND F01-F09=0	→ class=1	[2, 3]	43 : 57	-0.971	2
344	J20-J22=0 AND N80-N98=0 AND F01-F09=0 AND H00-H05=0 AND K00-K14=0	→ class=1	[2, 6]	30 : 70	-0.811	5
346	TRUE	→ class=1	[3, 3]	50 : 50	-1.000	
	B85-B89#0	→ class=0	[4, 0]	83 : 17	-0.00	1
1	B90-B94#0	→ class=0	[2, 0]	75 : 25	-0.00	1
2	B95-B97#0	→ class=0	[6, 0]	88 : 12	-0.00	1
3	C51-C58#0	→ class=0	[5, 0]	86 : 14	-0.00	1
4	C81-C96#0	→ class=0	[5, 0]	86 : 14	-0.00	1
5	D37-D48#0	→ class=0	[7, 0]	89 : 11	-0.00	1
6	D80-D89#0	→ class=0	[2, 0]	75 : 25	-0.00	1
7	E50-E64#0	→ class=0	[5, 0]	86 : 14	-0.00	1
8	E65-E68#0	→ class=0	[3, 0]	80 : 20	-0.00	1
9	F60-F69#0	→ class=0	[2, 0]	75 : 25	-0.00	1

+ 247 more



Target class: 1



Calibration Plot

Target class: 1

