

<=30	age <=30	high	no	fair	buys_computer no	
>40 medium no fair yes >40 low yes fair yes >40 low yes excellent no 3140 low yes excellent yes =30 medium no fair no <<30	<=30	high	no	excellent	no	
>40 low yes fair yes >40 low yes excellent no 3140 low yes excellent yes =30 medium no fair no <=30	3140	high	no	fair	yes	
>40 low yes excellent no 3140 low yes excellent yes <=30	>40	medium	no	fair	yes	
3140 low yes excellent yes <=30 medium	>40	low	yes	fair	yes	
<=30	>40	low	yes	excellent	no	
<=30	3140	low	yes	excellent	yes	
>40 medium yes fair yes <=30 medium yes excellent yes	<=30	medium	no	fair		
<=30 medium yes excellent yes	<=30	low	yes	fair		
7	>40			fair	yes	
24 40 madisus ma lavallant sun	<=30	medium	yes	excellent	yes	
3140 medium no excellent yes	3140	medium	no	excellent	yes	
3140 high yes fair yes	3140	high	yes	fair	yes	
>40 medium no excellent no	>40	medium	no	excellent	no	

	_ age \sim	
4.30	3140	740
no	yes	yes
no	yes	yes
no	yes	ho
yes	yes	ves
yes yes		no

Pecursive Greedy Recursive

F₁ age 2 = 30

age incore student cre

1	age	incore	student	cre dit	buys
I	C+30	high	no	fair	no
	۷+30	high	'nο	excellent	ทง
	2 - 30	medium	no	Pair	no
	4.30	low	yes	fair	yes
	L* 30	medium	yes	ex cellent	yes

Info (D), 1/2 pilog 2 (pi)

- J (9,3)
- - \frac{2}{5} \log_1 \left(\frac{2}{5}\right) - \frac{3}{5} \log_2 \left(\frac{3}{5}\right) - 6.971

Infoincome (D) . 2 I (0,2) + 3 I (1,1) + 1 1(1,0)

* 0.4 💃

Gain income & Info (D) - Info income (D)

5 0.971 - 0.4 5 0.571

Info student (1) = $\frac{3}{5}$ = (0,3) + $\frac{2}{5}$ I (1,0)

 $=\frac{3}{5}\left[-\frac{9}{5}\log_{1}\left(\frac{9}{5}\right)-\frac{3}{3}\log_{1}\left(\frac{3}{2}\right)\right]+\frac{2}{5}\left[-\frac{1}{5}\log_{2}\left(\frac{1}{2}\right)-\frac{9}{5}\log_{3}\left(\frac{9}{2}\right)\right]$

, o

Gain student & Into (D) - Into student (D)

< 0.971-0 > 0.971

Info credit (D) = 3 I (1,1)+ 4 I (1,1)

· \frac{2}{5} [-\frac{1}{3} log_1 (\frac{1}{3}) - \frac{2}{3} log_2 (\frac{2}{3})] + \frac{2}{5} [-\frac{1}{2} log_2 (\frac{1}{3}) - \frac{1}{2} log_2 (\frac{1}{2})]

* 0.551 + 0.4 * 0.951 *

Gain credit - Info(D) - Info credit (D)

s 0.971 - 0.951 = 0.020

: Gain managison bain student

