

## --Algoritmo Amplify Iteracion 1--

### Reglas Setosa : 1

R0: if X3 is ['HN', 'MN'] then Setosa created with: 11 examples.

### Reglas Versicolor : 8

R1: if X1 is ['Z', 'SP', 'MP', 'HP'] and X3 is ['MN', 'SN', 'Z', 'SP'] then Versicolor created with: 6 examples.  
R2: if X0 is ['HN', 'MN', 'SN', 'SP', 'MP', 'HP'] and X1 is ['HN', 'SN', 'Z', 'SP', 'MP', 'HP'] and X2 is ['HN', 'MN', 'SN', 'Z', 'SP', 'HP'] and X3 is ['MN', 'SN', 'Z', 'SP'] then Versicolor created with: 16 examples.  
R3: if X2 is ['HN', 'MN', 'SN', 'Z', 'SP', 'HP'] and X3 is ['MN', 'SN', 'Z'] then Versicolor created with: 19 examples.  
R4: if X0 is ['MN', 'SN', 'Z', 'SP', 'MP', 'HP'] and X1 is ['MN', 'Z', 'SP', 'MP', 'HP'] and X3 is ['MN', 'SN', 'SP'] then Versicolor created with: 5 examples.  
R5: if X2 is ['HN', 'MN', 'SN', 'Z', 'HP'] and X3 is ['MN', 'SN', 'Z', 'SP'] then Versicolor created with: 7 examples.  
R6: if X0 is ['Z'] and X1 is ['HN'] and X2 is ['SP'] and X3 is ['SP'] then Versicolor created with: 1 examples.  
R7: if X0 is ['HN', 'MN', 'SN', 'Z', 'MP', 'HP'] and X1 is ['HN', 'Z', 'SP', 'MP', 'HP'] and X2 is ['HN', 'MN', 'SN', 'Z', 'SP', 'MP'] and X3 is ['MN', 'SN', 'Z', 'MP'] then Versicolor created with: 2 examples.  
R8: if X0 is ['Z'] and X1 is ['SN'] and X2 is ['SP'] and X3 is ['SP'] then Versicolor created with: 1 examples.

### Reglas Virginica : 9

R9: if X3 is ['MN', 'HP'] then Virginica created with: 12 examples.  
R10: if X2 is ['HN', 'MN', 'SN', 'Z', 'MP', 'HP'] and X3 is ['MN', 'MP', 'HP'] then Virginica created with: 17 examples.  
R11: if X1 is ['HN', 'MN', 'SN', 'SP', 'MP', 'HP'] and X3 is ['MN', 'MP', 'HP'] then Virginica created with: 16 examples.  
R12: if X0 is ['HN', 'MN', 'SN', 'SP', 'MP', 'HP'] and X1 is ['HN', 'MN', 'SP', 'MP', 'HP'] and X3 is ['MN', 'SP', 'MP', 'HP'] then Virginica created with: 5 examples.  
R13: if X0 is ['HN', 'MN', 'SN', 'SP', 'MP', 'HP'] and X3 is ['MN', 'MP', 'HP'] then Virginica created with: 10 examples.  
R14: if X0 is ['Z'] and X1 is ['HN'] and X2 is ['SP'] and X3 is ['SP'] then Virginica created with: 1 examples.  
R15: if X2 is ['HN', 'MN', 'SN', 'MP', 'HP'] and X3 is ['MN', 'SP', 'MP', 'HP'] then Virginica created with: 4 examples.  
R16: if X0 is ['Z'] and X1 is ['SN'] and X2 is ['SP'] and X3 is ['SP'] then Virginica created with: 1 examples.  
R17: if X2 is ['HN', 'MN', 'MP', 'HP'] and X3 is ['MN', 'SN', 'Z', 'SP', 'MP', 'HP'] then Virginica created with: 3 examples.

('Ejemplo', 'Ejemplo fuzzy', 'Nº Regla', 'Activacion', 'Clase ejemplo',  
'Prediccion', 'Resultado')  
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P. Acierto: 100.0%

P. No Clasificados: 0.0%

P. Fallo: 0.0%

## --Algoritmo Amplify Iteracion 2--

### Reglas Setosa : 1

R0: if X3 is ['HN', 'MN'] then Setosa created with: 11 examples.

### Reglas Versicolor : 8

R1: if X1 is ['Z', 'SP', 'MP', 'HP'] and X3 is ['MN', 'SN', 'Z', 'SP']  
then Versicolor created with: 6 examples.

R2: if X0 is ['HN', 'MN', 'SN', 'SP', 'MP', 'HP'] and X1 is ['HN', 'SN',  
'Z', 'SP', 'MP', 'HP'] and X2 is ['HN', 'MN', 'SN', 'Z', 'SP', 'HP'] and  
X3 is ['MN', 'SN', 'Z', 'SP'] then Versicolor created with: 16 examples.

R3: if X2 is ['HN', 'MN', 'SN', 'Z', 'SP', 'HP'] and X3 is ['MN', 'SN',  
'Z'] then Versicolor created with: 19 examples.

R4: if X0 is ['MN', 'SN', 'Z', 'SP', 'MP', 'HP'] and X1 is ['MN', 'Z',  
'SP', 'MP', 'HP'] and X3 is ['MN', 'SN', 'SP'] then Versicolor created  
with: 5 examples.

R5: if X2 is ['HN', 'MN', 'SN', 'Z', 'HP'] and X3 is ['MN', 'SN', 'Z',  
'SP'] then Versicolor created with: 7 examples.

R6: if X0 is ['Z'] and X1 is ['HN'] and X2 is ['SP'] and X3 is ['SP'] then  
Versicolor created with: 1 examples.

R7: if X0 is ['HN', 'MN', 'SN', 'Z', 'MP', 'HP'] and X1 is ['HN', 'Z',  
'SP', 'MP', 'HP'] and X2 is ['HN', 'MN', 'SN', 'Z', 'SP', 'MP'] and X3 is  
['MN', 'SN', 'Z', 'MP'] then Versicolor created with: 2 examples.

R8: if X0 is ['Z'] and X1 is ['SN'] and X2 is ['SP'] and X3 is ['SP'] then  
Versicolor created with: 1 examples.

### Reglas Virginica : 9

R9: if X3 is ['MN', 'HP'] then Virginica created with: 12 examples.

R10: if X2 is ['HN', 'MN', 'SN', 'Z', 'MP', 'HP'] and X3 is ['MN', 'MP',  
'HP'] then Virginica created with: 17 examples.

R11: if X1 is ['HN', 'MN', 'SN', 'SP', 'MP', 'HP'] and X3 is ['MN', 'MP',  
'HP'] then Virginica created with: 16 examples.

R12: if X0 is ['HN', 'MN', 'SN', 'SP', 'MP', 'HP'] and X1 is ['HN', 'MN',  
'SP', 'MP', 'HP'] and X3 is ['MN', 'SP', 'MP', 'HP'] then Virginica  
created with: 4 examples.

R13: if X0 is ['HN', 'MN', 'SN', 'SP', 'MP', 'HP'] and X3 is ['MN', 'MP',  
'HP'] then Virginica created with: 10 examples.

R14: if X0 is ['Z'] and X1 is ['HN'] and X2 is ['SP'] and X3 is ['SP']  
then Virginica created with: 1 examples.

R15: if X2 is ['HN', 'MN', 'SN', 'MP', 'HP'] and X3 is ['MN', 'SP', 'MP',  
'HP'] then Virginica created with: 4 examples.

R16: if X0 is ['Z'] and X1 is ['SN'] and X2 is ['SP'] and X3 is ['SP']

then Virginica created with: 1 examples.

R17: if X2 is ['HN', 'MN', 'MP', 'HP'] and X3 is ['MN', 'SN', 'Z', 'SP', 'MP', 'HP'] then Virginica created with: 3 examples.

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'Prediccion', 'Resultado')
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'Virginica', 'Acierto')

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P. Acierto: 100.0%

P. No Clasificados: 0.0%

P. Fallo: 0.0%

### --Algoritmo Amplify Iteracion 3--

#### Reglas Setosa : 1

R0: if X3 is ['HN', 'MN'] then Setosa created with: 11 examples.

#### Reglas Versicolor : 8

R1: if X1 is ['Z', 'SP', 'MP', 'HP'] and X3 is ['MN', 'SN', 'Z', 'SP'] then Versicolor created with: 6 examples.  
R2: if X0 is ['HN', 'MN', 'SN', 'SP', 'MP', 'HP'] and X1 is ['HN', 'SN', 'Z', 'SP', 'MP', 'HP'] and X2 is ['HN', 'MN', 'SN', 'Z', 'SP', 'HP'] and X3 is ['MN', 'SN', 'Z', 'SP'] then Versicolor created with: 16 examples.  
R3: if X2 is ['HN', 'MN', 'SN', 'Z', 'SP', 'HP'] and X3 is ['MN', 'SN', 'Z'] then Versicolor created with: 18 examples.  
R4: if X0 is ['MN', 'SN', 'Z', 'SP', 'MP', 'HP'] and X1 is ['MN', 'Z', 'SP', 'MP', 'HP'] and X3 is ['MN', 'SN', 'SP'] then Versicolor created with: 5 examples.  
R5: if X2 is ['HN', 'MN', 'SN', 'Z', 'HP'] and X3 is ['MN', 'SN', 'Z', 'SP'] then Versicolor created with: 7 examples.  
R6: if X0 is ['Z'] and X1 is ['HN'] and X2 is ['SP'] and X3 is ['SP'] then Versicolor created with: 1 examples.  
R7: if X0 is ['HN', 'MN', 'SN', 'Z', 'MP', 'HP'] and X1 is ['HN', 'Z', 'SP', 'MP', 'HP'] and X2 is ['HN', 'MN', 'SN', 'Z', 'SP', 'MP'] and X3 is ['MN', 'SN', 'Z', 'MP'] then Versicolor created with: 2 examples.  
R8: if X0 is ['Z'] and X1 is ['SN'] and X2 is ['SP'] and X3 is ['SP'] then Versicolor created with: 1 examples.

#### Reglas Virginica : 9

R9: if X3 is ['MN', 'HP'] then Virginica created with: 12 examples.  
R10: if X2 is ['HN', 'MN', 'SN', 'Z', 'MP', 'HP'] and X3 is ['MN', 'MP', 'HP'] then Virginica created with: 17 examples.  
R11: if X1 is ['HN', 'MN', 'SN', 'SP', 'MP', 'HP'] and X3 is ['MN', 'MP', 'HP'] then Virginica created with: 16 examples.  
R12: if X0 is ['HN', 'MN', 'SN', 'SP', 'MP', 'HP'] and X1 is ['HN', 'MN', 'SP', 'MP', 'HP'] and X3 is ['MN', 'SP', 'MP', 'HP'] then Virginica

created with: 5 examples.

R13: if X0 is ['HN', 'MN', 'SN', 'SP', 'MP', 'HP'] and X3 is ['MN', 'MP', 'HP'] then Virginica created with: 11 examples.

R14: if X0 is ['Z'] and X1 is ['HN'] and X2 is ['SP'] and X3 is ['SP'] then Virginica created with: 1 examples.

R15: if X2 is ['HN', 'MN', 'SN', 'MP', 'HP'] and X3 is ['MN', 'SP', 'MP', 'HP'] then Virginica created with: 4 examples.

R16: if X2 is ['HN', 'MN', 'MP', 'HP'] and X3 is ['MN', 'SN', 'Z', 'SP', 'MP', 'HP'] then Virginica created with: 3 examples.

R17: if X0 is ['Z'] and X1 is ['SN'] and X2 is ['SP'] and X3 is ['SP'] then Virginica created with: 1 examples.

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('Ejemplo', 'Ejemplo fuzzy', 'Nº Regla', 'Activacion', 'Clase ejemplo',
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P. Acierto: 100.0%

P. No Clasificados: 0.0%

P. Fallo: 0.0%

#### --Algoritmo Amplify Iteracion 4--

##### Reglas Setosa : 1

R0: if X3 is ['HN', 'MN'] then Setosa created with: 11 examples.

##### Reglas Versicolor : 8

R1: if X1 is ['Z', 'SP', 'MP', 'HP'] and X3 is ['MN', 'SN', 'Z', 'SP'] then Versicolor created with: 6 examples.  
R2: if X0 is ['HN', 'MN', 'SN', 'SP', 'MP', 'HP'] and X1 is ['HN', 'SN', 'Z', 'SP', 'MP', 'HP'] and X2 is ['HN', 'MN', 'SN', 'Z', 'SP', 'HP'] and X3 is ['MN', 'SN', 'Z', 'SP'] then Versicolor created with: 15 examples.  
R3: if X2 is ['HN', 'MN', 'SN', 'Z', 'SP', 'HP'] and X3 is ['MN', 'SN', 'Z'] then Versicolor created with: 20 examples.  
R4: if X0 is ['MN', 'SN', 'Z', 'SP', 'MP', 'HP'] and X1 is ['MN', 'Z', 'SP', 'MP', 'HP'] and X3 is ['MN', 'SN', 'SP'] then Versicolor created with: 6 examples.  
R5: if X2 is ['HN', 'MN', 'SN', 'Z', 'HP'] and X3 is ['MN', 'SN', 'Z', 'SP'] then Versicolor created with: 6 examples.  
R6: if X0 is ['Z'] and X1 is ['HN'] and X2 is ['SP'] and X3 is ['SP'] then Versicolor created with: 1 examples.  
R7: if X0 is ['HN', 'MN', 'SN', 'Z', 'MP', 'HP'] and X1 is ['HN', 'Z', 'SP', 'MP', 'HP'] and X2 is ['HN', 'MN', 'SN', 'Z', 'SP', 'MP'] and X3 is ['MN', 'SN', 'Z', 'MP'] then Versicolor created with: 2 examples.  
R8: if X0 is ['Z'] and X1 is ['SN'] and X2 is ['SP'] and X3 is ['SP'] then Versicolor created with: 1 examples.

##### Reglas Virginica : 9

R9: if X3 is ['MN', 'HP'] then Virginica created with: 12 examples.  
R10: if X2 is ['HN', 'MN', 'SN', 'Z', 'MP', 'HP'] and X3 is ['MN', 'MP', 'HP'] then Virginica created with: 17 examples.  
R11: if X1 is ['HN', 'MN', 'SN', 'SP', 'MP', 'HP'] and X3 is ['MN', 'MP', 'HP'] then Virginica created with: 16 examples.  
R12: if X0 is ['HN', 'MN', 'SN', 'SP', 'MP', 'HP'] and X1 is ['HN', 'MN', 'SP', 'MP', 'HP'] and X3 is ['MN', 'SP', 'MP', 'HP'] then Virginica created with: 5 examples.  
R13: if X0 is ['HN', 'MN', 'SN', 'SP', 'MP', 'HP'] and X3 is ['MN', 'MP', 'HP'] then Virginica created with: 10 examples.  
R14: if X0 is ['Z'] and X1 is ['HN'] and X2 is ['SP'] and X3 is ['SP'] then Virginica created with: 1 examples.  
R15: if X2 is ['HN', 'MN', 'SN', 'MP', 'HP'] and X3 is ['MN', 'SP', 'MP', 'HP'] then Virginica created with: 3 examples.  
R16: if X0 is ['Z'] and X1 is ['SN'] and X2 is ['SP'] and X3 is ['SP'] then Virginica created with: 1 examples.  
R17: if X2 is ['HN', 'MN', 'MP', 'HP'] and X3 is ['MN', 'SN', 'Z', 'SP', 'MP', 'HP'] then Virginica created with: 2 examples.

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'Prediccion', 'Resultado')
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P. Acierto: 100.0%

P. No Clasificados: 0.0%

P. Fallo: 0.0%

#### --Algoritmo Amplify Iteracion 5--

##### Reglas Setosa : 1

R0: if X3 is ['HN', 'MN'] then Setosa created with: 11 examples.

##### Reglas Versicolor : 8

R1: if X1 is ['Z', 'SP', 'MP', 'HP'] and X3 is ['MN', 'SN', 'Z', 'SP'] then Versicolor created with: 6 examples.

R2: if X0 is ['HN', 'MN', 'SN', 'SP', 'MP', 'HP'] and X1 is ['HN', 'SN', 'Z', 'SP', 'MP', 'HP'] and X2 is ['HN', 'MN', 'SN', 'Z', 'SP', 'HP'] and X3 is ['MN', 'SN', 'Z', 'SP'] then Versicolor created with: 16 examples.

R3: if X2 is ['HN', 'MN', 'SN', 'Z', 'SP', 'HP'] and X3 is ['MN', 'SN', 'Z'] then Versicolor created with: 18 examples.

R4: if X0 is ['MN', 'SN', 'Z', 'SP', 'MP', 'HP'] and X1 is ['MN', 'Z', 'SP', 'MP', 'HP'] and X3 is ['MN', 'SN', 'SP'] then Versicolor created with: 5 examples.

R5: if X2 is ['HN', 'MN', 'SN', 'Z', 'HP'] and X3 is ['MN', 'SN', 'Z', 'SP'] then Versicolor created with: 7 examples.

R6: if X0 is ['Z'] and X1 is ['HN'] and X2 is ['SP'] and X3 is ['SP'] then Versicolor created with: 1 examples.  
 R7: if X0 is ['HN', 'MN', 'SN', 'Z', 'MP', 'HP'] and X1 is ['HN', 'Z', 'SP', 'MP', 'HP'] and X2 is ['HN', 'MN', 'SN', 'Z', 'SP', 'MP'] and X3 is ['MN', 'SN', 'Z', 'MP'] then Versicolor created with: 2 examples.  
 R8: if X0 is ['Z'] and X1 is ['SN'] and X2 is ['SP'] and X3 is ['SP'] then Versicolor created with: 1 examples.

## Reglas Virginica : 9

R9: if X3 is ['MN', 'HP'] then Virginica created with: 12 examples.  
 R10: if X2 is ['HN', 'MN', 'SN', 'Z', 'MP', 'HP'] and X3 is ['MN', 'MP', 'HP'] then Virginica created with: 17 examples.  
 R11: if X1 is ['HN', 'MN', 'SN', 'SP', 'MP', 'HP'] and X3 is ['MN', 'MP', 'HP'] then Virginica created with: 16 examples.  
 R12: if X0 is ['HN', 'MN', 'SN', 'SP', 'MP', 'HP'] and X1 is ['HN', 'MN', 'SP', 'MP', 'HP'] and X3 is ['MN', 'SP', 'MP', 'HP'] then Virginica created with: 5 examples.  
 R13: if X0 is ['HN', 'MN', 'SN', 'SP', 'MP', 'HP'] and X3 is ['MN', 'MP', 'HP'] then Virginica created with: 10 examples.  
 R14: if X0 is ['Z'] and X1 is ['HN'] and X2 is ['SP'] and X3 is ['SP'] then Virginica created with: 1 examples.  
 R15: if X2 is ['HN', 'MN', 'SN', 'MP', 'HP'] and X3 is ['MN', 'SP', 'MP', 'HP'] then Virginica created with: 4 examples.  
 R16: if X0 is ['Z'] and X1 is ['SN'] and X2 is ['SP'] and X3 is ['SP'] then Virginica created with: 1 examples.  
 R17: if X2 is ['HN', 'MN', 'MP', 'HP'] and X3 is ['MN', 'SN', 'Z', 'SP', 'MP', 'HP'] then Virginica created with: 3 examples.

('Ejemplo', 'Ejemplo fuzzy', 'Nº Regla', 'Activacion', 'Clase ejemplo', 'Prediccion', 'Resultado')
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P. Acierto: 100.0%

P. No Clasificados: 0.0%

P. Fallo: 0.0%

**--Algoritmo Amplify Iteracion 6--**

**Reglas Setosa : 1**

R0: if X3 is ['HN', 'MN'] then Setosa created with: 11 examples.

**Reglas Versicolor : 8**

R1: if X2 is ['HN', 'MN', 'SN', 'Z', 'SP', 'HP'] and X3 is ['MN', 'SN', 'Z'] then Versicolor created with: 19 examples.

R2: if X1 is ['Z', 'SP', 'MP', 'HP'] and X3 is ['MN', 'SN', 'Z', 'SP'] then Versicolor created with: 6 examples.

R3: if X0 is ['HN', 'MN', 'SN', 'SP', 'MP', 'HP'] and X1 is ['HN', 'SN', 'Z', 'SP', 'MP', 'HP'] and X2 is ['HN', 'MN', 'SN', 'Z', 'SP', 'HP'] and X3 is ['MN', 'SN', 'Z', 'SP'] then Versicolor created with: 15 examples.

R4: if X0 is ['MN', 'SN', 'Z', 'SP', 'MP', 'HP'] and X1 is ['MN', 'Z', 'SP', 'MP', 'HP'] and X3 is ['MN', 'SN', 'SP'] then Versicolor created with: 5 examples.

R5: if X2 is ['HN', 'MN', 'SN', 'Z', 'HP'] and X3 is ['MN', 'SN', 'Z', 'SP'] then Versicolor created with: 7 examples.

R6: if X0 is ['Z'] and X1 is ['HN'] and X2 is ['SP'] and X3 is ['SP'] then Versicolor created with: 1 examples.

R7: if X0 is ['HN', 'MN', 'SN', 'Z', 'MP', 'HP'] and X1 is ['HN', 'Z', 'SP', 'MP', 'HP'] and X2 is ['HN', 'MN', 'SN', 'Z', 'SP', 'MP'] and X3 is ['MN', 'SN', 'Z', 'MP'] then Versicolor created with: 1 examples.

R8: if X0 is ['Z'] and X1 is ['SN'] and X2 is ['SP'] and X3 is ['SP'] then Versicolor created with: 1 examples.

### Reglas Virginica : 8

R9: if X1 is ['HN', 'MN', 'SN', 'SP', 'MP', 'HP'] and X3 is ['MN', 'MP', 'HP'] then Virginica created with: 18 examples.

R10: if X3 is ['MN', 'HP'] then Virginica created with: 10 examples.

R11: if X0 is ['HN', 'MN', 'SN', 'SP', 'MP', 'HP'] and X1 is ['HN', 'MN', 'SP', 'MP', 'HP'] and X3 is ['MN', 'SP', 'MP', 'HP'] then Virginica created with: 5 examples.

R12: if X0 is ['HN', 'MN', 'SN', 'SP', 'MP', 'HP'] and X3 is ['MN', 'MP', 'HP'] then Virginica created with: 10 examples.

R13: if X0 is ['Z'] and X1 is ['HN'] and X2 is ['SP'] and X3 is ['SP'] then Virginica created with: 1 examples.

R14: if X2 is ['HN', 'MN', 'SN', 'MP', 'HP'] and X3 is ['MN', 'SP', 'MP', 'HP'] then Virginica created with: 3 examples.

R15: if X0 is ['Z'] and X1 is ['SN'] and X2 is ['SP'] and X3 is ['SP'] then Virginica created with: 1 examples.

R16: if X2 is ['HN', 'MN', 'MP', 'HP'] and X3 is ['MN', 'SN', 'Z', 'SP', 'MP', 'HP'] then Virginica created with: 2 examples.

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P. Acierto: 100.0%

P. No Clasificados: 0.0%

P. Fallo: 0.0%

--Algoritmo Amplify Iteracion 7--

Reglas Setosa : 1

R0: if X3 is ['HN', 'MN'] then Setosa created with: 11 examples.

#### **Reglas Versicolor : 8**

R1: if X1 is ['Z', 'SP', 'MP', 'HP'] and X3 is ['MN', 'SN', 'Z', 'SP'] then Versicolor created with: 6 examples.

R2: if X0 is ['HN', 'MN', 'SN', 'SP', 'MP', 'HP'] and X1 is ['HN', 'SN', 'Z', 'SP', 'MP', 'HP'] and X2 is ['HN', 'MN', 'SN', 'Z', 'SP', 'HP'] and X3 is ['MN', 'SN', 'Z', 'SP'] then Versicolor created with: 16 examples.

R3: if X2 is ['HN', 'MN', 'SN', 'Z', 'SP', 'HP'] and X3 is ['MN', 'SN', 'Z'] then Versicolor created with: 19 examples.

R4: if X0 is ['MN', 'SN', 'Z', 'SP', 'MP', 'HP'] and X1 is ['MN', 'Z', 'SP', 'MP', 'HP'] and X3 is ['MN', 'SN', 'SP'] then Versicolor created with: 5 examples.

R5: if X2 is ['HN', 'MN', 'SN', 'Z', 'HP'] and X3 is ['MN', 'SN', 'Z', 'SP'] then Versicolor created with: 6 examples.

R6: if X0 is ['Z'] and X1 is ['HN'] and X2 is ['SP'] and X3 is ['SP'] then Versicolor created with: 1 examples.

R7: if X0 is ['HN', 'MN', 'SN', 'Z', 'MP', 'HP'] and X1 is ['HN', 'Z', 'SP', 'MP', 'HP'] and X2 is ['HN', 'MN', 'SN', 'Z', 'SP', 'MP'] and X3 is ['MN', 'SN', 'Z', 'MP'] then Versicolor created with: 2 examples.

R8: if X0 is ['Z'] and X1 is ['SN'] and X2 is ['SP'] and X3 is ['SP'] then Versicolor created with: 1 examples.

#### **Reglas Virginica : 9**

R9: if X3 is ['MN', 'HP'] then Virginica created with: 12 examples.

R10: if X2 is ['HN', 'MN', 'SN', 'Z', 'MP', 'HP'] and X3 is ['MN', 'MP', 'HP'] then Virginica created with: 17 examples.

R11: if X1 is ['HN', 'MN', 'SN', 'SP', 'MP', 'HP'] and X3 is ['MN', 'MP', 'HP'] then Virginica created with: 16 examples.

R12: if X0 is ['HN', 'MN', 'SN', 'SP', 'MP', 'HP'] and X1 is ['HN', 'MN', 'SP', 'MP', 'HP'] and X3 is ['MN', 'SP', 'MP', 'HP'] then Virginica created with: 5 examples.

R13: if X2 is ['HN', 'MN', 'SN', 'MP', 'HP'] and X3 is ['MN', 'SP', 'MP', 'HP'] then Virginica created with: 10 examples.

R14: if X0 is ['HN', 'MN', 'SN', 'SP', 'MP', 'HP'] and X3 is ['MN', 'MP', 'HP'] then Virginica created with: 10 examples.

R15: if X0 is ['Z'] and X1 is ['HN'] and X2 is ['SP'] and X3 is ['SP'] then Virginica created with: 1 examples.

R16: if X0 is ['Z'] and X1 is ['SN'] and X2 is ['SP'] and X3 is ['SP'] then Virginica created with: 1 examples.

R17: if X2 is ['HN', 'MN', 'MP', 'HP'] and X3 is ['MN', 'SN', 'Z', 'SP', 'MP', 'HP'] then Virginica created with: 3 examples.

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P. Acierto: 100.0%  
P. No Clasificados: 0.0%  
P. Fallo: 0.0%

#### --Algoritmo Amplify Iteracion 8--

##### Reglas Setosa : 1

R0: if X3 is ['HN', 'MN'] then Setosa created with: 11 examples.

##### Reglas Versicolor : 8

R1: if X1 is ['Z', 'SP', 'MP', 'HP'] and X3 is ['MN', 'SN', 'Z', 'SP'] then Versicolor created with: 6 examples.  
R2: if X0 is ['HN', 'MN', 'SN', 'SP', 'MP', 'HP'] and X1 is ['HN', 'SN', 'Z', 'SP', 'MP', 'HP'] and X2 is ['HN', 'MN', 'SN', 'Z', 'SP', 'HP'] and X3 is ['MN', 'SN', 'Z', 'SP'] then Versicolor created with: 16 examples.  
R3: if X2 is ['HN', 'MN', 'SN', 'Z', 'SP', 'HP'] and X3 is ['MN', 'SN', 'Z'] then Versicolor created with: 19 examples.  
R4: if X0 is ['MN', 'SN', 'Z', 'SP', 'MP', 'HP'] and X1 is ['MN', 'Z', 'SP', 'MP', 'HP'] and X3 is ['MN', 'SN', 'SP'] then Versicolor created with: 5 examples.  
R5: if X2 is ['HN', 'MN', 'SN', 'Z', 'HP'] and X3 is ['MN', 'SN', 'Z', 'SP'] then Versicolor created with: 7 examples.  
R6: if X0 is ['Z'] and X1 is ['HN'] and X2 is ['SP'] and X3 is ['SP'] then Versicolor created with: 1 examples.  
R7: if X0 is ['HN', 'MN', 'SN', 'Z', 'MP', 'HP'] and X1 is ['HN', 'Z', 'SP', 'MP', 'HP'] and X2 is ['HN', 'MN', 'SN', 'Z', 'SP', 'MP'] and X3 is ['MN', 'SN', 'Z', 'MP'] then Versicolor created with: 2 examples.  
R8: if X0 is ['Z'] and X1 is ['SN'] and X2 is ['SP'] and X3 is ['SP'] then Versicolor created with: 1 examples.

##### Reglas Virginica : 9

R9: if X3 is ['MN', 'HP'] then Virginica created with: 12 examples.  
R10: if X2 is ['HN', 'MN', 'SN', 'Z', 'MP', 'HP'] and X3 is ['MN', 'MP', 'HP'] then Virginica created with: 17 examples.  
R11: if X1 is ['HN', 'MN', 'SN', 'SP', 'MP', 'HP'] and X3 is ['MN', 'MP', 'HP'] then Virginica created with: 16 examples.  
R12: if X0 is ['HN', 'MN', 'SN', 'SP', 'MP', 'HP'] and X1 is ['HN', 'MN', 'SP', 'MP', 'HP'] and X3 is ['MN', 'SP', 'MP', 'HP'] then Virginica created with: 5 examples.  
R13: if X0 is ['HN', 'MN', 'SN', 'SP', 'MP', 'HP'] and X3 is ['MN', 'MP', 'HP'] then Virginica created with: 10 examples.  
R14: if X0 is ['Z'] and X1 is ['HN'] and X2 is ['SP'] and X3 is ['SP'] then Virginica created with: 1 examples.  
R15: if X2 is ['HN', 'MN', 'SN', 'MP', 'HP'] and X3 is ['MN', 'SP', 'MP', 'HP'] then Virginica created with: 4 examples.  
R16: if X0 is ['Z'] and X1 is ['SN'] and X2 is ['SP'] and X3 is ['SP'] then Virginica created with: 1 examples.  
R17: if X2 is ['HN', 'MN', 'MP', 'HP'] and X3 is ['MN', 'SN', 'Z', 'SP',



'MP', 'HP'] then Virginica created with: 3 examples.

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P. Acierto: 100.0%

P. No Clasificados: 0.0%

P. Fallo: 0.0%

### --Algoritmo Amplify Iteracion 9--

#### Reglas Setosa : 1

R0: if X3 is ['HN', 'MN'] then Setosa created with: 11 examples.

#### Reglas Versicolor : 8

R1: if X1 is ['Z', 'SP', 'MP', 'HP'] and X3 is ['MN', 'SN', 'Z', 'SP'] then Versicolor created with: 6 examples.  
R2: if X0 is ['HN', 'MN', 'SN', 'SP', 'MP', 'HP'] and X1 is ['HN', 'SN', 'Z', 'SP', 'MP', 'HP'] and X2 is ['HN', 'MN', 'SN', 'Z', 'SP', 'HP'] and X3 is ['MN', 'SN', 'Z', 'SP'] then Versicolor created with: 16 examples.  
R3: if X2 is ['HN', 'MN', 'SN', 'Z', 'SP', 'HP'] and X3 is ['MN', 'SN', 'Z'] then Versicolor created with: 19 examples.  
R4: if X0 is ['MN', 'SN', 'Z', 'SP', 'MP', 'HP'] and X1 is ['MN', 'Z', 'SP', 'MP', 'HP'] and X3 is ['MN', 'SN', 'SP'] then Versicolor created with: 5 examples.  
R5: if X2 is ['HN', 'MN', 'SN', 'Z', 'HP'] and X3 is ['MN', 'SN', 'Z', 'SP'] then Versicolor created with: 7 examples.  
R6: if X0 is ['Z'] and X1 is ['HN'] and X2 is ['SP'] and X3 is ['SP'] then Versicolor created with: 1 examples.  
R7: if X0 is ['HN', 'MN', 'SN', 'Z', 'MP', 'HP'] and X1 is ['HN', 'Z', 'SP', 'MP', 'HP'] and X2 is ['HN', 'MN', 'SN', 'Z', 'SP', 'MP'] and X3 is ['MN', 'SN', 'Z', 'MP'] then Versicolor created with: 2 examples.  
R8: if X0 is ['Z'] and X1 is ['SN'] and X2 is ['SP'] and X3 is ['SP'] then Versicolor created with: 1 examples.

#### Reglas Virginica : 9

R9: if X3 is ['MN', 'HP'] then Virginica created with: 12 examples.  
R10: if X2 is ['HN', 'MN', 'SN', 'Z', 'MP', 'HP'] and X3 is ['MN', 'MP', 'HP'] then Virginica created with: 17 examples.  
R11: if X1 is ['HN', 'MN', 'SN', 'SP', 'MP', 'HP'] and X3 is ['MN', 'MP', 'HP'] then Virginica created with: 16 examples.  
R12: if X0 is ['HN', 'MN', 'SN', 'SP', 'MP', 'HP'] and X1 is ['HN', 'MN', 'SP', 'MP', 'HP'] and X3 is ['MN', 'SP', 'MP', 'HP'] then Virginica created with: 5 examples.  
R13: if X0 is ['HN', 'MN', 'SN', 'SP', 'MP', 'HP'] and X3 is ['MN', 'MP',

'HP'] then Virginica created with: 11 examples.  
R14: if X0 is ['Z'] and X1 is ['HN'] and X2 is ['SP'] and X3 is ['SP']  
then Virginica created with: 1 examples.  
R15: if X2 is ['HN', 'MN', 'SN', 'MP', 'HP'] and X3 is ['MN', 'SP', 'MP',  
'HP'] then Virginica created with: 4 examples.  
R16: if X0 is ['Z'] and X1 is ['SN'] and X2 is ['SP'] and X3 is ['SP']  
then Virginica created with: 1 examples.  
R17: if X2 is ['HN', 'MN', 'MP', 'HP'] and X3 is ['MN', 'SN', 'Z', 'SP',  
'MP', 'HP'] then Virginica created with: 3 examples.

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P. Acierto: 100.0%

P. No Clasificados: 0.0%

P. Fallo: 0.0%

**--Algoritmo Amplify Iteracion 10--**

**Reglas Setosa : 1**

R0: if X3 is ['HN', 'MN'] then Setosa created with: 11 examples.

**Reglas Versicolor : 8**

R1: if X1 is ['Z', 'SP', 'MP', 'HP'] and X3 is ['MN', 'SN', 'Z', 'SP'] then Versicolor created with: 6 examples.  
R2: if X0 is ['HN', 'MN', 'SN', 'SP', 'MP', 'HP'] and X1 is ['HN', 'SN', 'Z', 'SP', 'MP', 'HP'] and X2 is ['HN', 'MN', 'SN', 'Z', 'SP', 'HP'] and X3 is ['MN', 'SN', 'Z', 'SP'] then Versicolor created with: 16 examples.  
R3: if X2 is ['HN', 'MN', 'SN', 'Z', 'SP', 'HP'] and X3 is ['MN', 'SN', 'Z'] then Versicolor created with: 19 examples.  
R4: if X0 is ['MN', 'SN', 'Z', 'SP', 'MP', 'HP'] and X1 is ['MN', 'Z', 'SP', 'MP', 'HP'] and X3 is ['MN', 'SN', 'SP'] then Versicolor created with: 5 examples.  
R5: if X2 is ['HN', 'MN', 'SN', 'Z', 'HP'] and X3 is ['MN', 'SN', 'Z', 'SP'] then Versicolor created with: 7 examples.  
R6: if X0 is ['Z'] and X1 is ['HN'] and X2 is ['SP'] and X3 is ['SP'] then Versicolor created with: 1 examples.  
R7: if X0 is ['HN', 'MN', 'SN', 'Z', 'MP', 'HP'] and X1 is ['HN', 'Z', 'SP', 'MP', 'HP'] and X2 is ['HN', 'MN', 'SN', 'Z', 'SP', 'MP'] and X3 is ['MN', 'SN', 'Z', 'MP'] then Versicolor created with: 2 examples.  
R8: if X0 is ['Z'] and X1 is ['SN'] and X2 is ['SP'] and X3 is ['SP'] then Versicolor created with: 1 examples.

**Reglas Virginica : 9**

R9: if X3 is ['MN', 'HP'] then Virginica created with: 12 examples.

R10: if X2 is ['HN', 'MN', 'SN', 'Z', 'MP', 'HP'] and X3 is ['MN', 'MP', 'HP'] then Virginica created with: 17 examples.  
 R11: if X1 is ['HN', 'MN', 'SN', 'SP', 'MP', 'HP'] and X3 is ['MN', 'MP', 'HP'] then Virginica created with: 16 examples.  
 R12: if X0 is ['HN', 'MN', 'SN', 'SP', 'MP', 'HP'] and X1 is ['HN', 'MN', 'SP', 'MP', 'HP'] and X3 is ['MN', 'SP', 'MP', 'HP'] then Virginica created with: 5 examples.  
 R13: if X0 is ['HN', 'MN', 'SN', 'SP', 'MP', 'HP'] and X3 is ['MN', 'MP', 'HP'] then Virginica created with: 10 examples.  
 R14: if X0 is ['Z'] and X1 is ['HN'] and X2 is ['SP'] and X3 is ['SP'] then Virginica created with: 1 examples.  
 R15: if X2 is ['HN', 'MN', 'SN', 'MP', 'HP'] and X3 is ['MN', 'SP', 'MP', 'HP'] then Virginica created with: 4 examples.  
 R16: if X0 is ['Z'] and X1 is ['SN'] and X2 is ['SP'] and X3 is ['SP'] then Virginica created with: 1 examples.  
 R17: if X2 is ['HN', 'MN', 'MP', 'HP'] and X3 is ['MN', 'SN', 'Z', 'SP', 'MP', 'HP'] then Virginica created with: 3 examples.

```
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'Prediccion', 'Resultado')
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'Setosa', 'Acierto')
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'Versicolor', 'Acierto')
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P. Acierto: 100.0%

P. No Clasificados: 0.0%

P. Fallo: 0.0%

#### --- Informe de resultados del algoritmo --- Amplify

Numero total de ejemplos: 150

Numero de clases: 3

Numero de variables: 4

Porcentaje de ejemplos usados para entrenamiento: 0.8%

Porcentaje de ejemplos usados para test: 0.2%

Numero total de ejemplos entrenamiento: 120

Numero total de ejemplos test: 30

Numero total de ejecuciones: 10

Tiempo de ejecucion del algoritmo: 0.3s

#### ----Resumen pruebas algoritmo----

Castro, Castro-schez, zurita

Media de P. Acierto: 100.0%

Media de P. No Clasificados: 0.0%

Media de P. No Clasificados: 0.0%

Prueba	Setosa	Versicolor	Virginica	Total	Acierto	NC	Fallo
1	1	8	9	18	100.0%	0.0%	0.0%

2	1	8	9	18	100.0%	0.0%	0.0%
3	1	8	9	18	100.0%	0.0%	0.0%
4	1	8	9	18	100.0%	0.0%	0.0%
5	1	8	9	18	100.0%	0.0%	0.0%
6	1	8	8	17	100.0%	0.0%	0.0%
7	1	8	9	18	100.0%	0.0%	0.0%
8	1	8	9	18	100.0%	0.0%	0.0%
9	1	8	9	18	100.0%	0.0%	0.0%
10	1	8	9	18	100.0%	0.0%	0.0%

## --Algoritmo Elsevier Iteracion 1--

### Reglas Setosa : 1

R0: if X2 is HN then Setosa created with: 11 examples.

### Reglas Versicolor : 3

R1: if X2 is Z then Versicolor created with: 10 examples.

R2: if X2 is SN then Versicolor created with: 4 examples.

R3: if X0 is SP and X3 is SP then Versicolor created with: 2 examples.

### Reglas Virginica : 3

R4: if X2 is MP then Virginica created with: 11 examples.

R5: if X0 is HP then Virginica created with: 5 examples.

R6: if X0 is HN and X1 is MN then Virginica created with: 1 examples.

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'Virginica', 'Acierto')

```

P. Acierto: 100.0%

P. No Clasificados: 0.0%

P. Fallo: 0.0%

**--Algoritmo Elsevier Iteracion 2--**

**Reglas Setosa : 1**

R0: if X2 is HN then Setosa created with: 11 examples.

**Reglas Versicolor : 3**

R1: if X2 is Z then Versicolor created with: 10 examples.

R2: if X2 is SN then Versicolor created with: 4 examples.

R3: if X0 is SP and X3 is SP then Versicolor created with: 2 examples.

**Reglas Virginica : 3**

R4: if X2 is MP then Virginica created with: 11 examples.

R5: if X0 is HP then Virginica created with: 5 examples.

R6: if X0 is HN and X1 is MN then Virginica created with: 1 examples.

```

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P. Acierto: 100.0%
P. No Clasificados: 0.0%
P. Fallo: 0.0%

```

### --Algoritmo Elsevier Iteracion 3--

#### Reglas Setosa : 1

R0: if X2 is HN then Setosa created with: 11 examples.

#### Reglas Versicolor : 3

R1: if X2 is Z then Versicolor created with: 10 examples.  
R2: if X2 is SN then Versicolor created with: 4 examples.  
R3: if X0 is SP and X3 is SP then Versicolor created with: 2 examples.

#### Reglas Virginica : 3

R4: if X2 is MP then Virginica created with: 11 examples.  
R5: if X0 is HP then Virginica created with: 5 examples.  
R6: if X0 is HN and X1 is MN then Virginica created with: 1 examples.

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([6.3, 2.5, 5.0, 1.9], ['Z', 'MN', 'SP', 'MP'], 'R4', 0.2, 'Virginica',
'Virginica', 'Acierto')
([6.5, 3.0, 5.2, 2.0], ['SP', 'SN', 'MP', 'MP'], 'R4', 0.6, 'Virginica',
'Virginica', 'Acierto')
([6.2, 3.4, 5.4, 2.3], ['Z', 'SP', 'MP', 'HP'], 'R4', 1.0, 'Virginica',
'Virginica', 'Acierto')
([5.9, 3.0, 5.1, 1.8], ['Z', 'SN', 'SP', 'MP'], 'R4', 0.4, 'Virginica',
'Virginica', 'Acierto')

```

P. Acierto: 100.0%

P. No Clasificados: 0.0%

P. Fallo: 0.0%

--Algoritmo Elsevier Iteracion 4--

**Reglas Setosa : 1**

R0: if X2 is HN then Setosa created with: 11 examples.

**Reglas Versicolor : 3**

R1: if X2 is Z then Versicolor created with: 9 examples.  
R2: if X2 is SN then Versicolor created with: 5 examples.  
R3: if X0 is SP and X3 is SP then Versicolor created with: 2 examples.

### Reglas Virginica : 3

R4: if X2 is MP then Virginica created with: 11 examples.  
R5: if X0 is HP then Virginica created with: 5 examples.  
R6: if X0 is SN and X1 is MN and X2 is SP then Virginica created with: 1 examples.

```
( 'Ejemplo', 'Ejemplo fuzzy', 'Nº Regla', 'Activacion', 'Clase ejemplo',
 'Prediccion', 'Resultado')
([5.1, 3.4, 1.5, 0.2], ['MN', 'SP', 'HN', 'HN'], 'R0', 1, 'Setosa',
 'Setosa', 'Acierto')
([5.0, 3.5, 1.3, 0.3], ['MN', 'SP', 'HN', 'HN'], 'R0', 1, 'Setosa',
 'Setosa', 'Acierto')
([4.5, 2.3, 1.3, 0.3], ['HN', 'HN', 'HN', 'HN'], 'R0', 1, 'Setosa',
 'Setosa', 'Acierto')
([4.4, 3.2, 1.3, 0.2], ['HN', 'Z', 'HN', 'HN'], 'R0', 1, 'Setosa',
 'Setosa', 'Acierto')
([5.0, 3.5, 1.6, 0.6], ['MN', 'SP', 'HN', 'MN'], 'R0', 1, 'Setosa',
 'Setosa', 'Acierto')
([5.1, 3.8, 1.9, 0.4], ['MN', 'MP', 'HN', 'HN'], 'R0', 0.8, 'Setosa',
 'Setosa', 'Acierto')
([5.1, 3.8, 1.6, 0.2], ['MN', 'MP', 'HN', 'HN'], 'R0', 1, 'Setosa',
 'Setosa', 'Acierto')
([4.6, 3.2, 1.4, 0.2], ['HN', 'Z', 'HN', 'HN'], 'R0', 1, 'Setosa',
 'Setosa', 'Acierto')
([5.3, 3.7, 1.5, 0.2], ['MN', 'MP', 'HN', 'HN'], 'R0', 1, 'Setosa',
 'Setosa', 'Acierto')
([5.0, 3.3, 1.4, 0.2], ['MN', 'Z', 'HN', 'HN'], 'R0', 1, 'Setosa',
 'Setosa', 'Acierto')
([5.5, 2.5, 4.0, 1.3], ['SN', 'MN', 'Z', 'Z'], 'R1', 0.9, 'Versicolor',
 'Versicolor', 'Acierto')
([5.5, 2.6, 4.4, 1.2], ['SN', 'MN', 'SP', 'Z'], 'R1', 0.4, 'Versicolor',
 'Versicolor', 'Acierto')
([6.1, 3.0, 4.6, 1.4], ['Z', 'SN', 'SP', 'Z'], 'R1', 0.1, 'Versicolor',
 'Versicolor', 'Acierto')
([5.8, 2.6, 4.0, 1.2], ['SN', 'MN', 'Z', 'Z'], 'R1', 0.9, 'Versicolor',
 'Versicolor', 'Acierto')
([5.0, 2.3, 3.3, 1.0], ['MN', 'HN', 'SN', 'SN'], 'R2', 0.9, 'Versicolor',
 'Versicolor', 'Acierto')
([5.6, 2.7, 4.2, 1.3], ['SN', 'MN', 'Z', 'Z'], 'R1', 0.7, 'Versicolor',
 'Versicolor', 'Acierto')
([5.7, 2.9, 4.2, 1.3], ['SN', 'SN', 'Z', 'Z'], 'R1', 0.7, 'Versicolor',
 'Versicolor', 'Acierto')
([6.2, 2.9, 4.3, 1.3], ['Z', 'SN', 'Z', 'Z'], 'R1', 0.5, 'Versicolor',
 'Versicolor', 'Acierto')
([5.1, 2.5, 3.0, 1.1], ['MN', 'MN', 'SN', 'SN'], 'R2', 0.7, 'Versicolor',
 'Versicolor', 'Acierto')
([5.7, 2.8, 4.1, 1.3], ['SN', 'SN', 'Z', 'Z'], 'R1', 0.8, 'Versicolor',
 'Versicolor', 'Acierto')
```

```
([6.9, 3.1, 5.4, 2.1], ['MP', 'Z', 'MP', 'HP'], 'R4', 1.0, 'Virginica',
'Virginica', 'Acierto')
([6.7, 3.1, 5.6, 2.4], ['SP', 'Z', 'MP', 'HP'], 'R4', 0.8, 'Virginica',
'Virginica', 'Acierto')
([6.9, 3.1, 5.1, 2.3], ['MP', 'Z', 'SP', 'HP'], 'R4', 0.4, 'Virginica',
'Virginica', 'Acierto')
([5.8, 2.7, 5.1, 1.9], ['SN', 'MN', 'SP', 'MP'], 'R4', 0.4, 'Virginica',
'Virginica', 'Acierto')
([6.8, 3.2, 5.9, 2.3], ['MP', 'Z', 'HP', 'HP'], 'R4', 0.4, 'Virginica',
'Virginica', 'Acierto')
([6.7, 3.3, 5.7, 2.5], ['SP', 'Z', 'MP', 'HP'], 'R4', 0.6, 'Virginica',
'Virginica', 'Acierto')
([6.3, 2.5, 5.0, 1.9], ['Z', 'MN', 'SP', 'MP'], 'R4', 0.2, 'Virginica',
'Virginica', 'Acierto')
([6.5, 3.0, 5.2, 2.0], ['SP', 'SN', 'MP', 'MP'], 'R4', 0.6, 'Virginica',
'Virginica', 'Acierto')
([6.2, 3.4, 5.4, 2.3], ['Z', 'SP', 'MP', 'HP'], 'R4', 1.0, 'Virginica',
'Virginica', 'Acierto')
([5.9, 3.0, 5.1, 1.8], ['Z', 'SN', 'SP', 'MP'], 'R4', 0.4, 'Virginica',
'Virginica', 'Acierto')
```

P. Acierto: 93.3%

P. No Clasificados: 3.3%

P. Fallo: 3.3%

**--Algoritmo Elsevier Iteracion 5--**

**Reglas Setosa : 1**

R0: if X2 is HN then Setosa created with: 11 examples.

**Reglas Versicolor : 3**

R1: if X2 is Z then Versicolor created with: 10 examples.

R2: if X2 is SN then Versicolor created with: 4 examples.

R3: if X0 is SP and X3 is SP then Versicolor created with: 2 examples.

**Reglas Virginica : 3**

R4: if X2 is MP then Virginica created with: 11 examples.

R5: if X0 is HP then Virginica created with: 5 examples.

R6: if X0 is HN and X1 is MN then Virginica created with: 1 examples.

('Ejemplo', 'Ejemplo fuzzy', 'Nº Regla', 'Activacion', 'Clase ejemplo',  
'Prediccion', 'Resultado')

```
([5.1, 3.4, 1.5, 0.2], ['MN', 'SP', 'HN', 'HN'], 'R0', 1, 'Setosa',
'Setosa', 'Acierto')
```

```
([5.0, 3.5, 1.3, 0.3], ['MN', 'SP', 'HN', 'HN'], 'R0', 1, 'Setosa',
'Setosa', 'Acierto')
```

```
([4.5, 2.3, 1.3, 0.3], ['HN', 'HN', 'HN', 'HN'], 'R0', 1, 'Setosa',
```

```

'Setosa', 'Acierto')
([4.4, 3.2, 1.3, 0.2], ['HN', 'Z', 'HN', 'HN'], 'R0', 1, 'Setosa',
'Setosa', 'Acierto')
([5.0, 3.5, 1.6, 0.6], ['MN', 'SP', 'HN', 'MN'], 'R0', 1, 'Setosa',
'Setosa', 'Acierto')
([5.1, 3.8, 1.9, 0.4], ['MN', 'MP', 'HN', 'HN'], 'R0', 0.8, 'Setosa',
'Setosa', 'Acierto')
([5.1, 3.8, 1.6, 0.2], ['MN', 'MP', 'HN', 'HN'], 'R0', 1, 'Setosa',
'Setosa', 'Acierto')
([4.6, 3.2, 1.4, 0.2], ['HN', 'Z', 'HN', 'HN'], 'R0', 1, 'Setosa',
'Setosa', 'Acierto')
([5.3, 3.7, 1.5, 0.2], ['MN', 'MP', 'HN', 'HN'], 'R0', 1, 'Setosa',
'Setosa', 'Acierto')
([5.0, 3.3, 1.4, 0.2], ['MN', 'Z', 'HN', 'HN'], 'R0', 1, 'Setosa',
'Setosa', 'Acierto')
([5.5, 2.5, 4.0, 1.3], ['SN', 'MN', 'Z', 'Z'], 'R1', 0.9, 'Versicolor',
'Versicolor', 'Acierto')
([5.5, 2.6, 4.4, 1.2], ['SN', 'MN', 'SP', 'Z'], 'R1', 0.4, 'Versicolor',
'Versicolor', 'Acierto')
([6.1, 3.0, 4.6, 1.4], ['Z', 'SN', 'SP', 'Z'], 'R1', 0.1, 'Versicolor',
'Versicolor', 'Acierto')
([5.8, 2.6, 4.0, 1.2], ['SN', 'MN', 'Z', 'Z'], 'R1', 0.9, 'Versicolor',
'Versicolor', 'Acierto')
([5.0, 2.3, 3.3, 1.0], ['MN', 'HN', 'SN', 'SN'], 'R2', 0.9, 'Versicolor',
'Versicolor', 'Acierto')
([5.6, 2.7, 4.2, 1.3], ['SN', 'MN', 'Z', 'Z'], 'R1', 0.7, 'Versicolor',
'Versicolor', 'Acierto')
([5.7, 2.9, 4.2, 1.3], ['SN', 'SN', 'Z', 'Z'], 'R1', 0.7, 'Versicolor',
'Versicolor', 'Acierto')
([6.2, 2.9, 4.3, 1.3], ['Z', 'SN', 'Z', 'Z'], 'R1', 0.5, 'Versicolor',
'Versicolor', 'Acierto')
([5.1, 2.5, 3.0, 1.1], ['MN', 'MN', 'SN', 'SN'], 'R2', 0.7, 'Versicolor',
'Versicolor', 'Acierto')
([5.7, 2.8, 4.1, 1.3], ['SN', 'SN', 'Z', 'Z'], 'R1', 0.8, 'Versicolor',
'Versicolor', 'Acierto')
([6.9, 3.1, 5.4, 2.1], ['MP', 'Z', 'MP', 'HP'], 'R4', 1.0, 'Virginica',
'Virginica', 'Acierto')
([6.7, 3.1, 5.6, 2.4], ['SP', 'Z', 'MP', 'HP'], 'R4', 0.8, 'Virginica',
'Virginica', 'Acierto')
([6.9, 3.1, 5.1, 2.3], ['MP', 'Z', 'SP', 'HP'], 'R4', 0.4, 'Virginica',
'Virginica', 'Acierto')
([5.8, 2.7, 5.1, 1.9], ['SN', 'MN', 'SP', 'MP'], 'R4', 0.4, 'Virginica',
'Virginica', 'Acierto')
([6.8, 3.2, 5.9, 2.3], ['MP', 'Z', 'HP', 'HP'], 'R4', 0.4, 'Virginica',
'Virginica', 'Acierto')
([6.7, 3.3, 5.7, 2.5], ['SP', 'Z', 'MP', 'HP'], 'R4', 0.6, 'Virginica',
'Virginica', 'Acierto')
([6.3, 2.5, 5.0, 1.9], ['Z', 'MN', 'SP', 'MP'], 'R4', 0.2, 'Virginica',
'Virginica', 'Acierto')
([6.5, 3.0, 5.2, 2.0], ['SP', 'SN', 'MP', 'MP'], 'R4', 0.6, 'Virginica',
'Virginica', 'Acierto')
([6.2, 3.4, 5.4, 2.3], ['Z', 'SP', 'MP', 'HP'], 'R4', 1.0, 'Virginica',
'Virginica', 'Acierto')
([5.9, 3.0, 5.1, 1.8], ['Z', 'SN', 'SP', 'MP'], 'R4', 0.4, 'Virginica',
'Virginica', 'Acierto')

```

P. Acierto: 100.0%  
P. No Clasificados: 0.0%  
P. Fallo: 0.0%

#### --Algoritmo Elsevier Iteracion 6--

##### Reglas Setosa : 1

R0: if X2 is HN then Setosa created with: 11 examples.

##### Reglas Versicolor : 3

R1: if X2 is Z then Versicolor created with: 10 examples.  
R2: if X2 is SN then Versicolor created with: 4 examples.  
R3: if X0 is SP and X3 is SP then Versicolor created with: 2 examples.

##### Reglas Virginica : 3

R4: if X2 is MP then Virginica created with: 10 examples.  
R5: if X0 is HP then Virginica created with: 5 examples.  
R6: if X0 is HN and X1 is MN then Virginica created with: 1 examples.

('Ejemplo', 'Ejemplo fuzzy', 'Nº Regla', 'Activacion', 'Clase ejemplo', 'Prediccion', 'Resultado')
([5.1, 3.4, 1.5, 0.2], ['MN', 'SP', 'HN', 'HN'], 'R0', 1, 'Setosa', 'Setosa', 'Acierto')
([5.0, 3.5, 1.3, 0.3], ['MN', 'SP', 'HN', 'HN'], 'R0', 1, 'Setosa', 'Setosa', 'Acierto')
([4.5, 2.3, 1.3, 0.3], ['HN', 'HN', 'HN', 'HN'], 'R0', 1, 'Setosa', 'Setosa', 'Acierto')
([4.4, 3.2, 1.3, 0.2], ['HN', 'Z', 'HN', 'HN'], 'R0', 1, 'Setosa', 'Setosa', 'Acierto')
([5.0, 3.5, 1.6, 0.6], ['MN', 'SP', 'HN', 'MN'], 'R0', 1, 'Setosa', 'Setosa', 'Acierto')
([5.1, 3.8, 1.9, 0.4], ['MN', 'MP', 'HN', 'HN'], 'R0', 0.8, 'Setosa', 'Setosa', 'Acierto')
([5.1, 3.8, 1.6, 0.2], ['MN', 'MP', 'HN', 'HN'], 'R0', 1, 'Setosa', 'Setosa', 'Acierto')
([4.6, 3.2, 1.4, 0.2], ['HN', 'Z', 'HN', 'HN'], 'R0', 1, 'Setosa', 'Setosa', 'Acierto')
([5.3, 3.7, 1.5, 0.2], ['MN', 'MP', 'HN', 'HN'], 'R0', 1, 'Setosa', 'Setosa', 'Acierto')
([5.0, 3.3, 1.4, 0.2], ['MN', 'Z', 'HN', 'HN'], 'R0', 1, 'Setosa', 'Setosa', 'Acierto')
([5.5, 2.5, 4.0, 1.3], ['SN', 'MN', 'Z', 'Z'], 'R1', 0.9, 'Versicolor', 'Versicolor', 'Acierto')
([5.5, 2.6, 4.4, 1.2], ['SN', 'MN', 'SP', 'Z'], 'R1', 0.4, 'Versicolor', 'Versicolor', 'Acierto')
([6.1, 3.0, 4.6, 1.4], ['Z', 'SN', 'SP', 'Z'], 'R1', 0.1, 'Versicolor', 'Versicolor', 'Acierto')
([5.8, 2.6, 4.0, 1.2], ['SN', 'MN', 'Z', 'Z'], 'R1', 0.9, 'Versicolor', 'Versicolor', 'Acierto')



```

'Versicolor', 'Acierto')
([5.0, 2.3, 3.3, 1.0], ['MN', 'HN', 'SN', 'SN'], 'R2', 0.9, 'Versicolor',
'Versicolor', 'Acierto')
([5.6, 2.7, 4.2, 1.3], ['SN', 'MN', 'Z', 'Z'], 'R1', 0.7, 'Versicolor',
'Versicolor', 'Acierto')
([5.7, 2.9, 4.2, 1.3], ['SN', 'SN', 'Z', 'Z'], 'R1', 0.7, 'Versicolor',
'Versicolor', 'Acierto')
([6.2, 2.9, 4.3, 1.3], ['Z', 'SN', 'Z', 'Z'], 'R1', 0.5, 'Versicolor',
'Versicolor', 'Acierto')
([5.1, 2.5, 3.0, 1.1], ['MN', 'MN', 'SN', 'SN'], 'R2', 0.7, 'Versicolor',
'Versicolor', 'Acierto')
([5.7, 2.8, 4.1, 1.3], ['SN', 'SN', 'Z', 'Z'], 'R1', 0.8, 'Versicolor',
'Versicolor', 'Acierto')
([6.9, 3.1, 5.4, 2.1], ['MP', 'Z', 'MP', 'HP'], 'R4', 1.0, 'Virginica',
'Virginica', 'Acierto')
([6.7, 3.1, 5.6, 2.4], ['SP', 'Z', 'MP', 'HP'], 'R4', 0.8, 'Virginica',
'Virginica', 'Acierto')
([6.9, 3.1, 5.1, 2.3], ['MP', 'Z', 'SP', 'HP'], 'R4', 0.4, 'Virginica',
'Virginica', 'Acierto')
([5.8, 2.7, 5.1, 1.9], ['SN', 'MN', 'SP', 'MP'], 'R4', 0.4, 'Virginica',
'Virginica', 'Acierto')
([6.8, 3.2, 5.9, 2.3], ['MP', 'Z', 'HP', 'HP'], 'R4', 0.4, 'Virginica',
'Virginica', 'Acierto')
([6.7, 3.3, 5.7, 2.5], ['SP', 'Z', 'MP', 'HP'], 'R4', 0.6, 'Virginica',
'Virginica', 'Acierto')
([6.3, 2.5, 5.0, 1.9], ['Z', 'MN', 'SP', 'MP'], 'R4', 0.2, 'Virginica',
'Virginica', 'Acierto')
([6.5, 3.0, 5.2, 2.0], ['SP', 'SN', 'MP', 'MP'], 'R4', 0.6, 'Virginica',
'Virginica', 'Acierto')
([6.2, 3.4, 5.4, 2.3], ['Z', 'SP', 'MP', 'HP'], 'R4', 1.0, 'Virginica',
'Virginica', 'Acierto')
([5.9, 3.0, 5.1, 1.8], ['Z', 'SN', 'SP', 'MP'], 'R4', 0.4, 'Virginica',
'Virginica', 'Acierto')

```

```

P. Acierto: 100.0%
P. No Clasificados: 0.0%
P. Fallo: 0.0%

```

#### **--Algoritmo Elsevier Iteracion 7--**

##### **Reglas Setosa : 1**

R0: if X2 is HN then Setosa created with: 11 examples.

##### **Reglas Versicolor : 3**

R1: if X2 is Z then Versicolor created with: 10 examples.

R2: if X2 is SN then Versicolor created with: 4 examples.

R3: if X0 is SP and X3 is SP then Versicolor created with: 2 examples.

##### **Reglas Virginica : 3**

R4: if X2 is MP then Virginica created with: 11 examples.

R5: if X0 is HP then Virginica created with: 5 examples.  
R6: if X0 is HN and X1 is MN then Virginica created with: 1 examples.

```
('Ejemplo', 'Ejemplo fuzzy', 'Nº Regla', 'Activacion', 'Clase ejemplo',
'Prediccion', 'Resultado')
([5.1, 3.4, 1.5, 0.2], ['MN', 'SP', 'HN', 'HN'], 'R0', 1, 'Setosa',
'Setosa', 'Acierto')
([5.0, 3.5, 1.3, 0.3], ['MN', 'SP', 'HN', 'HN'], 'R0', 1, 'Setosa',
'Setosa', 'Acierto')
([4.5, 2.3, 1.3, 0.3], ['HN', 'HN', 'HN', 'HN'], 'R0', 1, 'Setosa',
'Setosa', 'Acierto')
([4.4, 3.2, 1.3, 0.2], ['HN', 'Z', 'HN', 'HN'], 'R0', 1, 'Setosa',
'Setosa', 'Acierto')
([5.0, 3.5, 1.6, 0.6], ['MN', 'SP', 'HN', 'MN'], 'R0', 1, 'Setosa',
'Setosa', 'Acierto')
([5.1, 3.8, 1.9, 0.4], ['MN', 'MP', 'HN', 'HN'], 'R0', 0.8, 'Setosa',
'Setosa', 'Acierto')
([5.1, 3.8, 1.6, 0.2], ['MN', 'MP', 'HN', 'HN'], 'R0', 1, 'Setosa',
'Setosa', 'Acierto')
([4.6, 3.2, 1.4, 0.2], ['HN', 'Z', 'HN', 'HN'], 'R0', 1, 'Setosa',
'Setosa', 'Acierto')
([5.3, 3.7, 1.5, 0.2], ['MN', 'MP', 'HN', 'HN'], 'R0', 1, 'Setosa',
'Setosa', 'Acierto')
([5.0, 3.3, 1.4, 0.2], ['MN', 'Z', 'HN', 'HN'], 'R0', 1, 'Setosa',
'Setosa', 'Acierto')
([5.5, 2.5, 4.0, 1.3], ['SN', 'MN', 'Z', 'Z'], 'R1', 0.9, 'Versicolor',
'Versicolor', 'Acierto')
([5.5, 2.6, 4.4, 1.2], ['SN', 'MN', 'SP', 'Z'], 'R1', 0.4, 'Versicolor',
'Versicolor', 'Acierto')
([6.1, 3.0, 4.6, 1.4], ['Z', 'SN', 'SP', 'Z'], 'R1', 0.1, 'Versicolor',
'Versicolor', 'Acierto')
([5.8, 2.6, 4.0, 1.2], ['SN', 'MN', 'Z', 'Z'], 'R1', 0.9, 'Versicolor',
'Versicolor', 'Acierto')
([5.0, 2.3, 3.3, 1.0], ['MN', 'HN', 'SN', 'SN'], 'R2', 0.9, 'Versicolor',
'Versicolor', 'Acierto')
([5.6, 2.7, 4.2, 1.3], ['SN', 'MN', 'Z', 'Z'], 'R1', 0.7, 'Versicolor',
'Versicolor', 'Acierto')
([5.7, 2.9, 4.2, 1.3], ['SN', 'SN', 'Z', 'Z'], 'R1', 0.7, 'Versicolor',
'Versicolor', 'Acierto')
([6.2, 2.9, 4.3, 1.3], ['Z', 'SN', 'Z', 'Z'], 'R1', 0.5, 'Versicolor',
'Versicolor', 'Acierto')
([5.1, 2.5, 3.0, 1.1], ['MN', 'MN', 'SN', 'SN'], 'R2', 0.7, 'Versicolor',
'Versicolor', 'Acierto')
([5.7, 2.8, 4.1, 1.3], ['SN', 'SN', 'Z', 'Z'], 'R1', 0.8, 'Versicolor',
'Versicolor', 'Acierto')
([6.9, 3.1, 5.4, 2.1], ['MP', 'Z', 'MP', 'HP'], 'R4', 1.0, 'Virginica',
'Virginica', 'Acierto')
([6.7, 3.1, 5.6, 2.4], ['SP', 'Z', 'MP', 'HP'], 'R4', 0.8, 'Virginica',
'Virginica', 'Acierto')
([6.9, 3.1, 5.1, 2.3], ['MP', 'Z', 'SP', 'HP'], 'R4', 0.4, 'Virginica',
'Virginica', 'Acierto')
([5.8, 2.7, 5.1, 1.9], ['SN', 'MN', 'SP', 'MP'], 'R4', 0.4, 'Virginica',
'Virginica', 'Acierto')
([6.8, 3.2, 5.9, 2.3], ['MP', 'Z', 'HP', 'HP'], 'R4', 0.4, 'Virginica',
```

```

'Virginica', 'Acierto')
([6.7, 3.3, 5.7, 2.5], ['SP', 'Z', 'MP', 'HP'], 'R4', 0.6, 'Virginica',
'Virginica', 'Acierto')
([6.3, 2.5, 5.0, 1.9], ['Z', 'MN', 'SP', 'MP'], 'R4', 0.2, 'Virginica',
'Virginica', 'Acierto')
([6.5, 3.0, 5.2, 2.0], ['SP', 'SN', 'MP', 'MP'], 'R4', 0.6, 'Virginica',
'Virginica', 'Acierto')
([6.2, 3.4, 5.4, 2.3], ['Z', 'SP', 'MP', 'HP'], 'R4', 1.0, 'Virginica',
'Virginica', 'Acierto')
([5.9, 3.0, 5.1, 1.8], ['Z', 'SN', 'SP', 'MP'], 'R4', 0.4, 'Virginica',
'Virginica', 'Acierto')

```

```

P. Acierto: 100.0%
P. No Clasificados: 0.0%
P. Fallo: 0.0%

```

#### **--Algoritmo Elsevier Iteracion 8--**

##### **Reglas Setosa : 1**

R0: if X2 is HN then Setosa created with: 11 examples.

##### **Reglas Versicolor : 3**

R1: if X2 is Z then Versicolor created with: 10 examples.  
R2: if X2 is SN then Versicolor created with: 4 examples.  
R3: if X0 is SP and X3 is SP then Versicolor created with: 2 examples.

##### **Reglas Virginica : 3**

R4: if X2 is MP then Virginica created with: 11 examples.  
R5: if X0 is HP then Virginica created with: 5 examples.  
R6: if X0 is HN and X1 is MN then Virginica created with: 1 examples.

```

('Ejemplo', 'Ejemplo fuzzy', 'Nº Regla', 'Activacion', 'Clase ejemplo',
'Prediccion', 'Resultado')
([5.1, 3.4, 1.5, 0.2], ['MN', 'SP', 'HN', 'HN'], 'R0', 1, 'Setosa',
'Setosa', 'Acierto')
([5.0, 3.5, 1.3, 0.3], ['MN', 'SP', 'HN', 'HN'], 'R0', 1, 'Setosa',
'Setosa', 'Acierto')
([4.5, 2.3, 1.3, 0.3], ['HN', 'HN', 'HN', 'HN'], 'R0', 1, 'Setosa',
'Setosa', 'Acierto')
([4.4, 3.2, 1.3, 0.2], ['HN', 'Z', 'HN', 'HN'], 'R0', 1, 'Setosa',
'Setosa', 'Acierto')
([5.0, 3.5, 1.6, 0.6], ['MN', 'SP', 'HN', 'MN'], 'R0', 1, 'Setosa',
'Setosa', 'Acierto')
([5.1, 3.8, 1.9, 0.4], ['MN', 'MP', 'HN', 'HN'], 'R0', 0.8, 'Setosa',
'Setosa', 'Acierto')
([5.1, 3.8, 1.6, 0.2], ['MN', 'MP', 'HN', 'HN'], 'R0', 1, 'Setosa',
'Setosa', 'Acierto')
([4.6, 3.2, 1.4, 0.2], ['HN', 'Z', 'HN', 'HN'], 'R0', 1, 'Setosa',

```

```

'Setosa', 'Acierto')
([5.3, 3.7, 1.5, 0.2], ['MN', 'MP', 'HN', 'HN'], 'R0', 1, 'Setosa',
'Setosa', 'Acierto')
([5.0, 3.3, 1.4, 0.2], ['MN', 'Z', 'HN', 'HN'], 'R0', 1, 'Setosa',
'Setosa', 'Acierto')
([5.5, 2.5, 4.0, 1.3], ['SN', 'MN', 'Z', 'Z'], 'R1', 0.9, 'Versicolor',
'Versicolor', 'Acierto')
([5.5, 2.6, 4.4, 1.2], ['SN', 'MN', 'SP', 'Z'], 'R1', 0.4, 'Versicolor',
'Versicolor', 'Acierto')
([6.1, 3.0, 4.6, 1.4], ['Z', 'SN', 'SP', 'Z'], 'R1', 0.1, 'Versicolor',
'Versicolor', 'Acierto')
([5.8, 2.6, 4.0, 1.2], ['SN', 'MN', 'Z', 'Z'], 'R1', 0.9, 'Versicolor',
'Versicolor', 'Acierto')
([5.0, 2.3, 3.3, 1.0], ['MN', 'HN', 'SN', 'SN'], 'R2', 0.9, 'Versicolor',
'Versicolor', 'Acierto')
([5.6, 2.7, 4.2, 1.3], ['SN', 'MN', 'Z', 'Z'], 'R1', 0.7, 'Versicolor',
'Versicolor', 'Acierto')
([5.7, 2.9, 4.2, 1.3], ['SN', 'SN', 'Z', 'Z'], 'R1', 0.7, 'Versicolor',
'Versicolor', 'Acierto')
([6.2, 2.9, 4.3, 1.3], ['Z', 'SN', 'Z', 'Z'], 'R1', 0.5, 'Versicolor',
'Versicolor', 'Acierto')
([5.1, 2.5, 3.0, 1.1], ['MN', 'MN', 'SN', 'SN'], 'R2', 0.7, 'Versicolor',
'Versicolor', 'Acierto')
([5.7, 2.8, 4.1, 1.3], ['SN', 'SN', 'Z', 'Z'], 'R1', 0.8, 'Versicolor',
'Versicolor', 'Acierto')
([6.9, 3.1, 5.4, 2.1], ['MP', 'Z', 'MP', 'HP'], 'R4', 1.0, 'Virginica',
'Virginica', 'Acierto')
([6.7, 3.1, 5.6, 2.4], ['SP', 'Z', 'MP', 'HP'], 'R4', 0.8, 'Virginica',
'Virginica', 'Acierto')
([6.9, 3.1, 5.1, 2.3], ['MP', 'Z', 'SP', 'HP'], 'R4', 0.4, 'Virginica',
'Virginica', 'Acierto')
([5.8, 2.7, 5.1, 1.9], ['SN', 'MN', 'SP', 'MP'], 'R4', 0.4, 'Virginica',
'Virginica', 'Acierto')
([6.8, 3.2, 5.9, 2.3], ['MP', 'Z', 'HP', 'HP'], 'R4', 0.4, 'Virginica',
'Virginica', 'Acierto')
([6.7, 3.3, 5.7, 2.5], ['SP', 'Z', 'MP', 'HP'], 'R4', 0.6, 'Virginica',
'Virginica', 'Acierto')
([6.3, 2.5, 5.0, 1.9], ['Z', 'MN', 'SP', 'MP'], 'R4', 0.2, 'Virginica',
'Virginica', 'Acierto')
([6.5, 3.0, 5.2, 2.0], ['SP', 'SN', 'MP', 'MP'], 'R4', 0.6, 'Virginica',
'Virginica', 'Acierto')
([6.2, 3.4, 5.4, 2.3], ['Z', 'SP', 'MP', 'HP'], 'R4', 1.0, 'Virginica',
'Virginica', 'Acierto')
([5.9, 3.0, 5.1, 1.8], ['Z', 'SN', 'SP', 'MP'], 'R4', 0.4, 'Virginica',
'Virginica', 'Acierto')

```

P. Acierto: 100.0%

P. No Clasificados: 0.0%

P. Fallo: 0.0%

--Algoritmo Elsevier Iteracion 9--

**Reglas Setosa : 1**

R0: if X2 is HN then Setosa created with: 11 examples.

### Reglas Versicolor : 3

R1: if X2 is Z then Versicolor created with: 10 examples.  
R2: if X2 is SN then Versicolor created with: 4 examples.  
R3: if X0 is SP and X3 is SP then Versicolor created with: 2 examples.

### Reglas Virginica : 3

R4: if X2 is MP then Virginica created with: 11 examples.  
R5: if X0 is HP then Virginica created with: 5 examples.  
R6: if X0 is HN and X1 is MN then Virginica created with: 1 examples.

```
('Ejemplo', 'Ejemplo fuzzy', 'Nº Regla', 'Activacion', 'Clase ejemplo',  
'Prediccion', 'Resultado')  
([5.1, 3.4, 1.5, 0.2], ['MN', 'SP', 'HN', 'HN'], 'R0', 1, 'Setosa',  
'Setosa', 'Acierto')  
([5.0, 3.5, 1.3, 0.3], ['MN', 'SP', 'HN', 'HN'], 'R0', 1, 'Setosa',  
'Setosa', 'Acierto')  
([4.5, 2.3, 1.3, 0.3], ['HN', 'HN', 'HN', 'HN'], 'R0', 1, 'Setosa',  
'Setosa', 'Acierto')  
([4.4, 3.2, 1.3, 0.2], ['HN', 'Z', 'HN', 'HN'], 'R0', 1, 'Setosa',  
'Setosa', 'Acierto')  
([5.0, 3.5, 1.6, 0.6], ['MN', 'SP', 'HN', 'MN'], 'R0', 1, 'Setosa',  
'Setosa', 'Acierto')  
([5.1, 3.8, 1.9, 0.4], ['MN', 'MP', 'HN', 'HN'], 'R0', 0.8, 'Setosa',  
'Setosa', 'Acierto')  
([5.1, 3.8, 1.6, 0.2], ['MN', 'MP', 'HN', 'HN'], 'R0', 1, 'Setosa',  
'Setosa', 'Acierto')  
([4.6, 3.2, 1.4, 0.2], ['HN', 'Z', 'HN', 'HN'], 'R0', 1, 'Setosa',  
'Setosa', 'Acierto')  
([5.3, 3.7, 1.5, 0.2], ['MN', 'MP', 'HN', 'HN'], 'R0', 1, 'Setosa',  
'Setosa', 'Acierto')  
([5.0, 3.3, 1.4, 0.2], ['MN', 'Z', 'HN', 'HN'], 'R0', 1, 'Setosa',  
'Setosa', 'Acierto')  
([5.5, 2.5, 4.0, 1.3], ['SN', 'MN', 'Z', 'Z'], 'R1', 0.9, 'Versicolor',  
'Versicolor', 'Acierto')  
([5.5, 2.6, 4.4, 1.2], ['SN', 'MN', 'SP', 'Z'], 'R1', 0.4, 'Versicolor',  
'Versicolor', 'Acierto')  
([6.1, 3.0, 4.6, 1.4], ['Z', 'SN', 'SP', 'Z'], 'R1', 0.1, 'Versicolor',  
'Versicolor', 'Acierto')  
([5.8, 2.6, 4.0, 1.2], ['SN', 'MN', 'Z', 'Z'], 'R1', 0.9, 'Versicolor',  
'Versicolor', 'Acierto')  
([5.0, 2.3, 3.3, 1.0], ['MN', 'HN', 'SN', 'SN'], 'R2', 0.9, 'Versicolor',  
'Versicolor', 'Acierto')  
([5.6, 2.7, 4.2, 1.3], ['SN', 'MN', 'Z', 'Z'], 'R1', 0.7, 'Versicolor',  
'Versicolor', 'Acierto')  
([5.7, 2.9, 4.2, 1.3], ['SN', 'SN', 'Z', 'Z'], 'R1', 0.7, 'Versicolor',  
'Versicolor', 'Acierto')  
([6.2, 2.9, 4.3, 1.3], ['Z', 'SN', 'Z', 'Z'], 'R1', 0.5, 'Versicolor',  
'Versicolor', 'Acierto')  
([5.1, 2.5, 3.0, 1.1], ['MN', 'MN', 'SN', 'SN'], 'R2', 0.7, 'Versicolor',
```

```

'Versicolor', 'Acierto')
([5.7, 2.8, 4.1, 1.3], ['SN', 'SN', 'Z', 'Z'], 'R1', 0.8, 'Versicolor',
'Versicolor', 'Acierto')
([6.9, 3.1, 5.4, 2.1], ['MP', 'Z', 'MP', 'HP'], 'R4', 1.0, 'Virginica',
'Virginica', 'Acierto')
([6.7, 3.1, 5.6, 2.4], ['SP', 'Z', 'MP', 'HP'], 'R4', 0.8, 'Virginica',
'Virginica', 'Acierto')
([6.9, 3.1, 5.1, 2.3], ['MP', 'Z', 'SP', 'HP'], 'R4', 0.4, 'Virginica',
'Virginica', 'Acierto')
([5.8, 2.7, 5.1, 1.9], ['SN', 'MN', 'SP', 'MP'], 'R4', 0.4, 'Virginica',
'Virginica', 'Acierto')
([6.8, 3.2, 5.9, 2.3], ['MP', 'Z', 'HP', 'HP'], 'R4', 0.4, 'Virginica',
'Virginica', 'Acierto')
([6.7, 3.3, 5.7, 2.5], ['SP', 'Z', 'MP', 'HP'], 'R4', 0.6, 'Virginica',
'Virginica', 'Acierto')
([6.3, 2.5, 5.0, 1.9], ['Z', 'MN', 'SP', 'MP'], 'R4', 0.2, 'Virginica',
'Virginica', 'Acierto')
([6.5, 3.0, 5.2, 2.0], ['SP', 'SN', 'MP', 'MP'], 'R4', 0.6, 'Virginica',
'Virginica', 'Acierto')
([6.2, 3.4, 5.4, 2.3], ['Z', 'SP', 'MP', 'HP'], 'R4', 1.0, 'Virginica',
'Virginica', 'Acierto')
([5.9, 3.0, 5.1, 1.8], ['Z', 'SN', 'SP', 'MP'], 'R4', 0.4, 'Virginica',
'Virginica', 'Acierto')

```

```

P. Acierto: 100.0%
P. No Clasificados: 0.0%
P. Fallo: 0.0%

```

**--Algoritmo Elsevier Iteracion 10--**

**Reglas Setosa : 1**

R0: if X2 is HN then Setosa created with: 11 examples.

**Reglas Versicolor : 3**

R1: if X2 is Z then Versicolor created with: 10 examples.  
R2: if X2 is SN then Versicolor created with: 4 examples.  
R3: if X0 is SP and X3 is SP then Versicolor created with: 2 examples.

**Reglas Virginica : 3**

R4: if X2 is MP then Virginica created with: 11 examples.  
R5: if X0 is HP then Virginica created with: 5 examples.  
R6: if X0 is HN and X1 is MN then Virginica created with: 1 examples.

```

('Ejemplo', 'Ejemplo fuzzy', 'Nº Regla', 'Activacion', 'Clase ejemplo',
'Prediccion', 'Resultado')
([5.1, 3.4, 1.5, 0.2], ['MN', 'SP', 'HN', 'HN'], 'R0', 1, 'Setosa',
'Setosa', 'Acierto')
([5.0, 3.5, 1.3, 0.3], ['MN', 'SP', 'HN', 'HN'], 'R0', 1, 'Setosa',

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```

'Setosa', 'Acierto')
([4.5, 2.3, 1.3, 0.3], ['HN', 'HN', 'HN', 'HN'], 'R0', 1, 'Setosa',
'Setosa', 'Acierto')
([4.4, 3.2, 1.3, 0.2], ['HN', 'Z', 'HN', 'HN'], 'R0', 1, 'Setosa',
'Setosa', 'Acierto')
([5.0, 3.5, 1.6, 0.6], ['MN', 'SP', 'HN', 'MN'], 'R0', 1, 'Setosa',
'Setosa', 'Acierto')
([5.1, 3.8, 1.9, 0.4], ['MN', 'MP', 'HN', 'HN'], 'R0', 0.8, 'Setosa',
'Setosa', 'Acierto')
([5.1, 3.8, 1.6, 0.2], ['MN', 'MP', 'HN', 'HN'], 'R0', 1, 'Setosa',
'Setosa', 'Acierto')
([4.6, 3.2, 1.4, 0.2], ['HN', 'Z', 'HN', 'HN'], 'R0', 1, 'Setosa',
'Setosa', 'Acierto')
([5.3, 3.7, 1.5, 0.2], ['MN', 'MP', 'HN', 'HN'], 'R0', 1, 'Setosa',
'Setosa', 'Acierto')
([5.0, 3.3, 1.4, 0.2], ['MN', 'Z', 'HN', 'HN'], 'R0', 1, 'Setosa',
'Setosa', 'Acierto')
([5.5, 2.5, 4.0, 1.3], ['SN', 'MN', 'Z', 'Z'], 'R1', 0.9, 'Versicolor',
'Versicolor', 'Acierto')
([5.5, 2.6, 4.4, 1.2], ['SN', 'MN', 'SP', 'Z'], 'R1', 0.4, 'Versicolor',
'Versicolor', 'Acierto')
([6.1, 3.0, 4.6, 1.4], ['Z', 'SN', 'SP', 'Z'], 'R1', 0.1, 'Versicolor',
'Versicolor', 'Acierto')
([5.8, 2.6, 4.0, 1.2], ['SN', 'MN', 'Z', 'Z'], 'R1', 0.9, 'Versicolor',
'Versicolor', 'Acierto')
([5.0, 2.3, 3.3, 1.0], ['MN', 'HN', 'SN', 'SN'], 'R2', 0.9, 'Versicolor',
'Versicolor', 'Acierto')
([5.6, 2.7, 4.2, 1.3], ['SN', 'MN', 'Z', 'Z'], 'R1', 0.7, 'Versicolor',
'Versicolor', 'Acierto')
([5.7, 2.9, 4.2, 1.3], ['SN', 'SN', 'Z', 'Z'], 'R1', 0.7, 'Versicolor',
'Versicolor', 'Acierto')
([6.2, 2.9, 4.3, 1.3], ['Z', 'SN', 'Z', 'Z'], 'R1', 0.5, 'Versicolor',
'Versicolor', 'Acierto')
([5.1, 2.5, 3.0, 1.1], ['MN', 'MN', 'SN', 'SN'], 'R2', 0.7, 'Versicolor',
'Versicolor', 'Acierto')
([5.7, 2.8, 4.1, 1.3], ['SN', 'SN', 'Z', 'Z'], 'R1', 0.8, 'Versicolor',
'Versicolor', 'Acierto')
([6.9, 3.1, 5.4, 2.1], ['MP', 'Z', 'MP', 'HP'], 'R4', 1.0, 'Virginica',
'Virginica', 'Acierto')
([6.7, 3.1, 5.6, 2.4], ['SP', 'Z', 'MP', 'HP'], 'R4', 0.8, 'Virginica',
'Virginica', 'Acierto')
([6.9, 3.1, 5.1, 2.3], ['MP', 'Z', 'SP', 'HP'], 'R4', 0.4, 'Virginica',
'Virginica', 'Acierto')
([5.8, 2.7, 5.1, 1.9], ['SN', 'MN', 'SP', 'MP'], 'R4', 0.4, 'Virginica',
'Virginica', 'Acierto')
([6.8, 3.2, 5.9, 2.3], ['MP', 'Z', 'HP', 'HP'], 'R4', 0.4, 'Virginica',
'Virginica', 'Acierto')
([6.7, 3.3, 5.7, 2.5], ['SP', 'Z', 'MP', 'HP'], 'R4', 0.6, 'Virginica',
'Virginica', 'Acierto')
([6.3, 2.5, 5.0, 1.9], ['Z', 'MN', 'SP', 'MP'], 'R4', 0.2, 'Virginica',
'Virginica', 'Acierto')
([6.5, 3.0, 5.2, 2.0], ['SP', 'SN', 'MP', 'MP'], 'R4', 0.6, 'Virginica',
'Virginica', 'Acierto')
([6.2, 3.4, 5.4, 2.3], ['Z', 'SP', 'MP', 'HP'], 'R4', 1.0, 'Virginica',
'Virginica', 'Acierto')
([5.9, 3.0, 5.1, 1.8], ['Z', 'SN', 'SP', 'MP'], 'R4', 0.4, 'Virginica',
'Virginica', 'Acierto')

```

P. Acierto: 100.0%  
P. No Clasificados: 0.0%  
P. Fallo: 0.0%

--- Informe de resultados del algoritmo --- Elsevier

Numero total de ejemplos: 150  
Numero de clases: 3  
Numero de variables: 4  
Porcentaje de ejemplos usados para entrenamiento: 0.8%  
Porcentaje de ejemplos usados para test: 0.2%  
Numero total de ejemplos entrenamiento: 120  
Numero total de ejemplos test: 30  
Numero total de ejecuciones: 10  
Tiempo de ejecucion del algoritmo: 0.3s

----Resumen pruebas algoritmo----

Monescillo and company  
Media de P. Acierto: 99.3%  
Media de P. No Clasificados: 0.3%  
Media de P. No Clasificados: 0.3%

Prueba	Setosa	Versicolor	Virginica	Total	Acierto	NC	Fallo
1	1	3	3	7	100.0%	0.0%	0.0%
2	1	3	3	7	100.0%	0.0%	0.0%
3	1	3	3	7	100.0%	0.0%	0.0%
4	1	3	3	7	93.3%	3.3%	3.3%
5	1	3	3	7	100.0%	0.0%	0.0%
6	1	3	3	7	100.0%	0.0%	0.0%
7	1	3	3	7	100.0%	0.0%	0.0%
8	1	3	3	7	100.0%	0.0%	0.0%
9	1	3	3	7	100.0%	0.0%	0.0%
10	1	3	3	7	100.0%	0.0%	0.0%



Amplify algorithm								Elsevier algorithm						
P	NRSe	NRVe	NRVi	Tot	Acc	NC	E	NRSe	NRVe	NRVi	Tot	Acc	NC	E
1	1	8	9	18	100.0%	0.0%	0.0%	1	3	3	7	100.0%	0.0%	0.0%
2	1	8	9	18	100.0%	0.0%	0.0%	1	3	3	7	100.0%	0.0%	0.0%
3	1	8	9	18	100.0%	0.0%	0.0%	1	3	3	7	100.0%	0.0%	0.0%
4	1	8	9	18	100.0%	0.0%	0.0%	1	3	3	7	93.3%	3.3%	3.3%
5	1	8	9	18	100.0%	0.0%	0.0%	1	3	3	7	100.0%	0.0%	0.0%
6	1	8	8	17	100.0%	0.0%	0.0%	1	3	3	7	100.0%	0.0%	0.0%
7	1	8	9	18	100.0%	0.0%	0.0%	1	3	3	7	100.0%	0.0%	0.0%
8	1	8	9	18	100.0%	0.0%	0.0%	1	3	3	7	100.0%	0.0%	0.0%
9	1	8	9	18	100.0%	0.0%	0.0%	1	3	3	7	100.0%	0.0%	0.0%
10	1	8	9	18	100.0%	0.0%	0.0%	1	3	3	7	100.0%	0.0%	0.0%

**P:** Prueba  
**NRSe:** Numero de Reglas Setosa  
**NRSe:** Numero de Reglas Versicolor  
**NRSe:** Numero de Reglas Virginica  
**Tot:** Total  
**Acc:** Porcentaje de Acierto  
**NC:** Porcentaje de No Clasificados  
**F:** Porcentaje de Fallo