## Fundamentos de OneHotEncoding

Atributo	A	В	C
A	1	0	0
В	0	1	0
A	1	0	0
С	0	0	1





## OneHotEncoding

- OneHotEncoding produz um único atributo de saída com uma matriz densa, a partir de n atributos numéricos
- Espera atributos numéricos: Podemos usar StringIndexer para transformar



+----+ |Geography|Gender| +----+ France Female Spain Female France | Female | France Female Spain Female Spain | Male France | Male Germany Female France Male Male France France Male Spain | Male France Female France Female Spain|Female| Germany Male Germany Male Spain | Female | Spain | Male France Female +----+

```
|indexer_c1|indexer_c2|
       0.0
                 1.0
       2.0
                 1.0
                 1.0
       0.0
       0.0
                 1.0
       2.0
                 1.0
       2.0
                 0.0
       0.0
                  0.0
       1.0
                 1.0
                  0.0
       0.0
       0.0
                  0.0
       0.0
                 0.0
       2.0
                  0.0
       0.0
                 1.0
                 1.0
       0.0
       2.0
                 1.0
                 0.0
       1.0
       1.0
                  0.0
       2.0
                 1.0
       2.0
                  0.0
       0.0
                  1.0
```

```
onehot_c1
              oneho_c2
|(2,[0],[1.0])|(1,[],[])
[(2,[],[])
              |(1,[],[])|
|(2,[0],[1.0])|(1,[],[])
|(2,[0],[1.0])|(1,[],[])
(2,[],[])
              |(1,[],[])|
              |(1,[0],[1.0])|
|(2,[],[])|
|(2,[0],[1.0])|(1,[0],[1.0])|
|(2,[1],[1.0])|(1,[],[])
|(2,[0],[1.0])|(1,[0],[1.0])|
|(2,[0],[1.0])|(1,[0],[1.0])|
|(2,[0],[1.0])|(1,[0],[1.0])|
|(2,[],[])|
              |(1,[0],[1.0])|
|(2,[0],[1.0])|(1,[],[])
|(2,[0],[1.0])|(1,[],[])
(2,[],[])
            (1,[],[])
|(2,[1],[1.0])|(1,[0],[1.0])|
|(2,[1],[1.0])|(1,[0],[1.0])|
              |(1,[],[])
(2,[1,[1)]
|(2,[],[])|
              |(1,[0],[1.0])|
|(2,[0],[1.0])|(1,[],[])
```