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Gauss-Jordan matrix inversion

Pseudo-code:

```
for k = 1 ... min(m,n):  
    Find the k-th pivot:  
    i_max := argmax (i = k ... m, abs(A[i, k]))  
    if A[i_max, k] = 0  
        error "Matrix is singular!"  
    swap rows(k, i_max)  
    Do for all rows below pivot:  
    for i = k + 1 ... m:  
        f := A[i, k] / A[k, k]  
        Do for all remaining elements in current  
row:  
        for j = k + 1 ... n:  
            A[i, j] := A[i, j] - A[k, j] * f  
    Fill lower triangular matrix with zeros:  
    A[i, k] := 0
```