Problem Link:

<https://leetcode.com/problems/count-submatrices-with-all-ones/?envType=daily-question&envId=2025-08-21>

Solution:

class Solution {

public:

int numSubmat(vector<vector<int>>& mat) {

int r = mat.size();

int c = mat[0].size();

vector<vector<int>> v(r, vector<int>(c, 0));

int s = 0;

for(int i = 0; i < r; ++i)

{

for(int j = 0; j < c; ++j)

{

if(mat[i][j] == 0)

v[i][j] = 0;

else

v[i][j] = (i == 0 ? 1 : v[i-1][j] + 1);

}

}

for(int i = 0; i < r; ++i)

{

for(int j = 0; j < c; ++j)

{

int m = v[i][j];

for(int k = j; k >= 0 && m > 0; --k)

{

m = min(m, v[i][k]);

s += m;

}

}

}

return s;

}

};