

BDLCV Sudoku Solver



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It's a fairly simple project, but quite the **UNEXPECTED!**

What normal sudoku solver can do is, you type in the elements of grid and that seriously is more pain than solving it yourself.

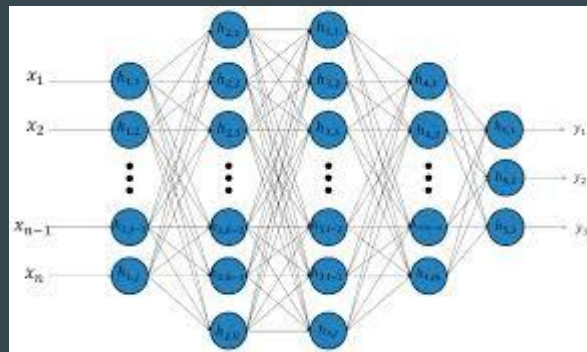
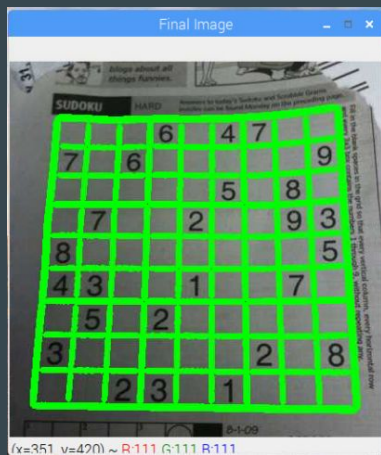
5	3			7				
6			1	9	5			
	9	8					6	
8				6				3
4			8		3			1
7				2				6
	6					2	8	
			4	1	9			5
				8			7	9

TO

5	3	4	6	7	8	9	1	2
6	7	2	1	9	5	3	4	8
1	9	8	3	4	2	5	6	7
8	5	9	7	6	1	4	2	3
4	2	6	8	5	3	7	9	1
7	1	3	9	2	4	8	5	6
9	6	1	5	3	7	2	8	4
2	8	7	4	1	9	6	3	5
3	4	5	2	8	6	1	7	9

Then what does our program bring to the table?

We used Computer Vision and Deep Learning to further improve the overall usability of the program.



How is it used?

Our program allows user to scan a printed sudoku grid via their webcam in real time and automatically structures and detects the grid and further provides you the solution. So, from now on, you won't have to hassell to input each digit one by one into the program. Just hold out your printed grid in front of the webcam, and it will get scanned, segregated using computer vision and digits identified one by one to create a grid into numpy array using deep learning and neural networks, and finally it is solved using backtracking and the solved sudoku is printed on the screen.

Conclusion

We made looking for solution to any sudoku really easy, so now you never need to hassle whenever you are unable to solve one.