

# Python Projekt

Michael Neuhold,  
Jany Julian,  
Gerald Mitterecker



# Idee: Image Sudoku Solver

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- Bilderkennung
- OpenCV
- Keras
- Tensorflow



A 9x9 Sudoku grid with numbers in green and black. The grid is as follows:

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

# Milestones

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- Backtracking (Sudoku-Solver)
- Bilderkennung (Sudoku-Raster)
- Ziffern erkennen (gedruckt/handschriftlich)
- (optional) Original Bild und Lösung überlagern
- (optional) UI zum importieren von Sudoku

