

Simon Grötzing
Ralf Vogler

groetzin@in.tum.de
ralf.vogler@mytum.de

3600830
3602420

Idea: Sudoku solver for Android

1. Acquire image using phone camera
2. Find Sudoku field in image and do perspective transform
3. Detect number squares
4. Character recognition for the numbers using a neural network
5. Use an existing solver to find a solution

Number recognition

1. **Increment:** use neural network in octave to recognize handwritten numbers
2. **Increment:** train network with generated images of numbers to recognize printed numbers in different sans-serif fonts

Image acquisition

1. **Increment:** detect Sudoku on screenshot using openCV
2. **Increment:** use image of printed Sudoku from webcam

Port code

1. **Increment:** develop on computer using openCV, Octave and an existing java Sudoku solver
2. **Increment:** port code to phone and use its camera

http://www.colloquial.com/games/sudoku/java_sudoku.html