

Python in the Enterprise

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1 PROJECT: SUDOKU SOLVER

Write sudoku solver. Your application should recognize the sudoku board (frame taken by the camera) and find the solution. All calculation should be done on the remote server (client-server application). Objectives:

- implement recognition of the board
 - HINT: my suggestion is to use powerful library OpenCV.
 - HINT: you need to use camera to capture the frame.
- prepare **Objected oriented** application. In general, please
 - follow the the Python coding standard
 - use polymorphism,
 - use design patterns,
 - separate validation of inputs and the program logic,
 - try to increase encapsulation level,
 - never use magic numbers and other constructions called Anti-patterns
 - configuration have to be stored in .xml file(s), and the XML parser should be implemented,
- You should implement client's and server's classes. All calculation should be performed via the server.

- HINT: you can use asyncore
 - HINT: second possibility is to use socketserver
 - the messages should be defined
 - collect whreshark (or other similar network analyser) logs
 - Test your application.
 - Each class should have own set of unit tests
 - use mocking tool
 - maximize code coverage
- be able to collect logs.
 - implement different log levels eg. Info, debug, warning, error.
 - HINT: you can use logging
 - SUGGESTION each log should contain: time stamp, module name and the log message