BLM / COM 491-492 Project Topics

1. Mobile automation system (Android) for University Orientation Days
2. Detection/Description and recognition in point clouds
3. Evaluation of point cloud alignment algorithms
4. Analysis of methods for interpolating Kinect depth data
5. Parallel genetic algorithm template library using POSIX threads, OpenMP or CUDA
6. Genetic algorithm based floor planning system
7. Outdoor Augmented Reality Application for Cultural Heritage on mobile devices
8. Development of a keyframe extraction algorithm for video sequences
9. Augmented Reality for extrusion of 3D walls from 2D floor plans
10. Mobile Outdoor Augmented Reality Game: Treasure Hunt
11. Augmented Reality Artwork View: See how Mona Lisa looks on your wall
12. Augmented Reality Desktop Science Laboratory: Atoms and molecules
13. Augmented Reality Desktop History Lecture: Ancient Buildings
14. Vision based indoor position estimation using markers
15. Evaluating performance of feature detectors for two-view geometry
16. Mobile Augmented Reality system for displaying classroom-specific timetable information
17. Vision-based wearable assistive device for Visually Impaired with Raspberry Pi
18. Outdoor Navigation for the Visually Impaired with Raspberry Pi
19. 3D Artillery Gun Simulator
20. Face Detection/Recognition in Crowded Scene Videos
21. Dental Plaque Detection from Images
22. Enhancing shape alignment and cloning features of Microsoft Visio
23. Analysing repeatability of image features
24. 3D reconstruction using computer vision
25. Augmented teleconference system
26. Augmented Reality Navigator
27. Intelligent Drone Navigation
28. Genetic Algorithm Based Maze Generation for Intelligent Pacman Game
29. Network Simulation: Performance analysis on routing protocols
30. Intelligent Meteor Crash Game

Notes:

1. The students can only apply for projects before the start of term or summer holidays. Late applications will not be considered.
2. Student project ideas are also welcome.
3. Contact supervisor for further details on the projects.
4. Some BLM/COM projects can be extended to two semesters.
5. Groups of at most two students can be considered. Pair-programming is encouraged provided that both students will undertake equal workload.

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