

Final Project Proposals

Computer Vision (Spring 2012)

1. Realtime Object Recognition in video games

Ari Morgan **(1)**

2. Multiple Camera Tracking with Wide Baseline Homography

Zhaowen Wang, Ning Xu, David Ho **(3)**

3. Multiview 3D object reconstruction

Vinay Muttineni, Mahesh Akella, Allan Law **(3)**

4. Wild Cat Identification

Mohammad Amanzadeh, Amit Das, Heman Gala **(3)**

5. Background subtraction: compare three methods

Kevin Shih, Philbert Lin, and Pooya Khorrami **(3)**

Compare three methods for background subtraction.

6. Taxi Detection and Tracking

AJ von Alt, Phil Lee **(2)**

Develop a method for detecting and tracking specific cars through a video sequence with applications to New York style Taxi cabs in an urban environment

7. Classroom webcam control

Sahil Handa, Sujay Bhowe, Suchithra Gopal **(3)**

8. K-mer Based DNA Sequence Alignment using Inverse Document File Approach

Izzat El Hajj **(1)**

One of the bottleneck problems in DNA sequence assembly and alignment is being able to find contigs in a database that overlap with a sequence of base pairs. The idea this project wishes to borrow from computer vision is the inverse document file approach used to query image databases.

9. Analyze material composition

Johannes Traa **(1)**

I would like to explore a computer vision application of techniques from compositional data analysis (CODA).

10. Bimanual Symmetric Gesture Recognition using Computer Vision

Aadeel Akhtar, Manoj Kumar, Tom Paine **(3)**

11. Similar category classification

Abdel Vargas Silva (1)

12. Real-time Segmentation of Human Data from Kinect

Pengye Xia, Nan Chen, and Tony Lau (3)

13. Street Sign Recognition

John Parkeer, Brian Wright (2)

14. Control law and parameter recovery from video footage

Sophie Puydupin and Pritam Sukumar (2)

15. Aircraft localization and classification

Jason Oates (1)

16. Detect Star Patterns for Space Navigation

Eric Babcock (1)

17. Create 3D Mesh using Kinect

Jorge Carmona (1)

18. Automatic Face Tagging

Thapanapong Rukkanchanunt, Manne Henriksson, Seylom Ayivi-Guedehoussou (3)

19. Object Removal by Retrieving Background Regions

Mariyam Khalid, Daphne Tsatsoulis, Zhicheng Yan (3)

20. Segment out person using Kinect

RJ Marsan, Felix Wang, John Wieting (3)

21. Playing Card Recognition

Cem Onyuksel, Adam Zimmerman (2)

22. Depth Upsampling using Sparse Dictionaries

Keunhong Park (1)

23. Monitoring and Diagnostics of Gas Turbines

Duy (Dewey) Tran (1)

24. Restoring Motion-Blurred Image

Chao Xia **(1)**

25. Power Watershed Segmentation

Pratik Mallya **(1)**

26. Carcassonne Gameboard Scorer

Zigang Xiao, Ting Yu **(2)**

27. Image Analysis of Maize Ear

Ou Yang Fu **(1)**