# Ahmad Humayun

304N CCB, Georgia Tech, Atlanta, GA 30332
+1 (404) 398-5465

ahumayun@cc.gatech.edu www.cc.gatech.edu/~ahumayun/ www.linkedin.com/in/ahmadhumayun

## Achievements

**Microsoft Research Project Prize** for best MSc. Computer Graphics, Vision and Imaging thesis at UCL (2010).

**BBC Best Overall Student Prize** in MSc. Computer Graphics, Vision and Imaging at UCL (2010).

**Software Design Finalist** for **Microsoft Imagine Cup 2007 Korea**. The project on Automated Video Recording of Lectures (AVRiL) was selected to represent Pakistan for the first time in this prestigious invitational.

**Mentor Graphics Project Award** for best BSc. Senior Year thesis - AVRiL (2007).

## Education

**Georgia Institute of Technology** Aug. '11 - (to date)
Computer Science PhD. student, School of Interactive Computing

**University College London** (UCL) Sept. '09 - Sept. '10
MSc. Computer Graphics, Vision and Imaging - *Distinction*

**Lahore University of Management Sciences** (LUMS) Aug. '03 - July '07
B.Sc. (Hons.). Computer Engineering (Major) - *High Merit*

## Professional Experience

**Georgia Institute of Technology** Aug. '11 - (to date)
*Graduate Research Assistant*, Computational Perception Laborartory (www.cc.gatech.edu/cpl/)

**The University of Warwick** Sept. '10 - Dec. '10
*Research Associate*, Department of Computer Science

**Lahore University of Management Sciences** Jan. '07 - July '09
*Research Associate*, Department of Computer Science

**MobileWeaver ApS** March '08 - Jan. '09
*Junior Software Developer*, Technical Department

## Selected Publications

**Video Segmentation by Tracking Many Figure-Ground Segments**. *IEEE ICCV* - Dec '13.
http://www.cc.gatech.edu/~fli/SegTrack2/

**Learning a Confidence Measure for Optical Flow**. *IEEE TPAMI* - May '13. http://tinyurl.com/pw76l9g

**RAMTaB: Robust Alignment of Multi-Tag Bioimages**. *PLoS ONE* - Feb. '12. http://tinyurl.com/otm3gly

**Learning to Find Occlusion Regions**. *IEEE CVPR* - June '11. http://visual.cs.ucl.ac.uk/pubs/learningOcclusion/

**Myosin Motors Drive Long Range Alignment of Actin Filaments**. *J. of Biological Chemistry* - Feb. '10.
http://www.jbc.org/content/285/7/4964.abstract

## Research Projects

**Occlusion Resolution and Tracking using Superpixels** as an *MSc. Thesis* at UCL
Worked on a supervised learning method to detect regions of occlusion in a two frame sequence. Tools: Matlab

**Tracking Techniques using Object's Shape Cues** as a *research initiative* at LUMS
Researched on tracking techniques for accurate generation of trajectories using object's non-rigid shape descriptors, resilient to occlusion. Partly funded by NSF. (http://www.cc.gatech.edu/~ahumayun/crspd.html) Tools: Matlab

**Molecular Pattern Analysis of Cancerous Colon Cells** as a *research initiative* at The University of Warwick
A multi-disciplinary project for the detection of cancerous tissue. We developed registration and non-linear embedding techniques for analysis of tissues from a multidimensional imaging process. Tools: Matlab

**Improvements in Google's MapReduce Architecture** as a *research initiative* at LUMS
Research enabling MapReduce, Google's data processing architecture, to run speculatively, whenever the input data is skewed. (https://code.google.com/p/mrplus/) Tools: Python, Apache Hadoop

**Automated Video Recording of Lectures** as a *senior year project* at LUMS
Developed a *direction* system that captures a multi-camera lecture environment. (http://avril.sproj.com) Tools: OpenCV

## Skills & Interests

*Proficient in* Matlab, C++, Python, OpenCV | Rock climbing, traveling, cycling, solving puzzles and photography.