Muhammad Asad

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Education

- **City University London** — London, UK
  PhD research student in Visual Computing; — *Feb. 2013 – Present*
  - Research Topic: Hand Pose and Orientation Estimation for Egocentric Devices
- **The University of Sheffield** — Sheffield, UK
  Master of Science in Computer Vision Engineering; — *Sep. 2011 – Sep. 2012*
  - Result: 74.9%; **MSc with Distinction**
  - Dissertation Project: Hand Gesture-Based Computer User Interface Using Microsoft Kinect
- **National University of Computer and Emerging Sciences (NUCES)** — Islamabad, Pakistan
  Bachelor of Science in Telecom. Engineering; GPA: 3.45/ 4.00 — *Sep. 2006 – Jun. 2010*
  - Final Project: Guidance System for Visually Impaired using Digital Image Processing
    - Real-time smartphone application for Android to assist visually impaired persons
- **Beaconhouse School System** — Islamabad, Pakistan
  GCE Advanced Level; 2 B's and 1 C — *Sep. 2004 – Jun. 2006*
  - Key Courses: Physics, Chemistry, Maths

Publications

- M.Asad, G.Slabaugh, "Learning Marginalization through Regression for Hand Orientation Inference", Computer Vision and Pattern Recognition (CVPR) Second Workshop on Observing and Understanding Hands in Action (HANDS) 2016 **(Best Paper Award Winner)**
- M.Asad, G.Yang, G.Slabaugh, "Supervised Partial Volume Effect Unmixing for Brain Tumor Characterization using Multi-voxel MR Spectroscopic Imaging", IEEE International Symposium on Biomedical Imaging (ISBI) 2016
- S.M.M.R.Al Arif, M.Asad, K.Knapp, M.Gundry, G.Slabaugh, "Cervical Vertebral Corner Detection using Haar-like Features and Modified Hough Forest", International Conference on Image Processing Theory, Tools and Applications (IPTA) 2015.
- M.Asad, E.Gentet, R.Basaru, G.Slabaugh "Generating a 3D Hand Model from Frontal Color and Range Scans", to appear, the International Conference on Image Processing (ICIP) 2015.
- S.M.M.R.Al Arif, M.Asad, K.Knapp, M.Gundry, A.Appelboam, A.Reuben, G.Slabaugh, "Hough Forest-based Corner Detection for Cervical Spine Radiographs", Medical Image Understanding and Analysis (MIUA) 2015.
- M.Asad, G.Slabaugh "Hand Orientation Regression using Random Forest for Augmented Reality", International Conference on Augmented and Virtual Reality (AVR'14), September 17-20, 2014, Italy
- M.Asad, C.Abhayaratne "Kinect Depth Stream Pre Processing for Hand Gesture Recognition",IEEE International Conference on Image Processing (ICIP'13), September 15-18, 2013, Australia
- M.Asad, W.Ikram "Smartphone based Guidance System for Visually Impaired Person", IEEE International Conference on Image Processing Theory, Tools and Applications (IPTA'12), October 15-18, 2012, Turkey

Relevant Experience

- **Learning Enhancement and Development, City University London** — London, UK
  Learning Object Designer — *May. 2015 – Aug. 2015*
  - Designing an online learning module - getting feedback from supervisor and improving existing learning modules.

- **School of Informatics, City University London** London, UK
  Matlab Programmer *Nov. 2014 – Apr. 2015*
  - Matlab programming, Signal and Image processing, software testing and documentation.

Technical Skills

Technologies: C/C++, Matlab, Python, Java, FPGA (Verilog and Vhdl)

Testing, Documentation and Bug Reporting: JIRA, Confluence, ServiceNow

Computer Vision Libraries: OpenCV (PC/Android), OpenNI (Kinect)

Hardware: Kinect Sensor, BeagleBoard, Spartan 3, Arduino Uno

Technical Documentation: Ability to communicate using technical reports detailing guidance documentation, performance analysis, technical discussions and proposed ideas. Familiar with using LaTeX.

Awards and Achievements

Scholarships: Awarded departmental **Merit Scholarship** at The University of Sheffield and **Fee Waiver** at City University London

Game Hackathon: Developed a game to help accelerate cancer research at a three day hackathon event (2013), **Google Campus**, London, UK

Reviewer of manuscripts for:

- IEEE Transactions on Systems, Man, and Cybernetics, Part B: Kinect and Its Applications
- SPIE: Journal of Electronic Imaging (JEI)

Other Experience

- **Learning Enhancement and Development, City University London** London, UK
  Project Support Officer (LEaD) *Feb. 2014 – Sep. 2014*
  - providing support for content migration, IT service management system, review and management of educational technology equipment, compiling minutes and actions from meetings.
- **Learning Development Centre (LDC), City University London** London, UK
  IT Project Officer (Content Migration) *Aug. 2013 – Sep. 2013*
  - prepared batch CSV for Kaltura, migrated videos using semi-automatic batch upload process, coordinated different stages of migration with staff, updated and managed the migrated content in moodle modules and reported recommendations and bugs.
- **Author of OpenCVKinect**
  https://github.com/masad801/OpenCVKinect
  - C++ Wrapper class for acquiring Kinect data streams in OpenCV
- **Author of AndroidWifi**
  http://seevisionc.blogspot.co.uk *Link to page: http://goo.gl/JKwHwE*
  - a set of batch scripts enabling users to share their internet with mobile devices using Microsoft Virtual Wifi Miniport

References

To be provided on request