

PULKIT BUDHIRAJA

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INTERESTS Mixed Reality, Computer Vision, Virtual Reality and Natural User Interfaces

EDUCATION

M.S. (THESIS) COMPUTER SCIENCE **GPA: 3.94**
UNIVERSITY OF ILLINOIS, URBANA-CHAMPAIGN **2013-2015 (EXPECTED)**
Computer Vision, Machine Learning in Signal Processing, User Interface Design

M.SC. (HONS.) BIOLOGICAL SCIENCES **GPA: 8.48/10**
B.E. (HONS.) COMPUTER SCIENCE
BITS PILANI, K K BIRLA GOA CAMPUS, INDIA **2007-2012**
Data Structures and Algorithms, Operating Systems, Computer Networks, Computer Architecture

EXPERIENCE

RESEARCH ASSISTANT, DEPT. OF COMPUTER SCIENCE, UIUC **JAN 2014 – PRESENT**

- Working under Prof. David Forsyth applying Computer Vision techniques to create novel experiences in Mixed Reality

RESEARCH INTERN, HP LABS, BANGALORE **JUL 2011 – JUN 2012**

- Developed multimodal system facilitating speech and/or gesture interaction in virtual environments
- System could understand spatial references, inter-object relations and attributes like color and size

MEMBER TECHNICAL STAFF, ORACLE INDIA (SERVER TECHNOLOGIES) **JUL 2012 – JUN 2013**

- Worked on upgrading the communication layer of Oracle Access Manager server to support IPv6

PROJECTS

WHERE'S MY DRINK? **MAY – SEP 2014**

- Explored different renderings to selectively bring real world objects into virtual world when using HMDs
- Performed a user study to establish least intrusive renderings in different virtual scenarios

PROJECTIBLES **JAN – APR 2014**

- Worked, as part of a group, on segmenting out dynamic data from cinemagraphs to project on top of printed static data to achieve high contrast ratio for HDR content projection

MEASURE ROOM DIMENSIONS USING KINECT **APR – MAY 2014**

- Create an application using KinectFusion and PCL to measure dimensions of a cluttered room
- Handled fusion of multiple point clouds enabling measurement of very big rooms

TECHNICAL SKILLS Languages: **C++, C#, Java, MATLAB, UNIX, C, Python**, Android development
Libraries: **OpenCV, PCL, OculusSDK**, Kinect For Windows SDK
Software: **Unity3D**, Blender, Adobe Creative Suite

PUBLICATIONS *The Blue One to the Left: Enabling Expressive User Interaction in a Multimodal Interface for Object Selection in Virtual 3D environments*
Pulkit Budhiraja and Sriganesh Madhvanath 2012 In *Proceedings of ICMI '12*: ACM. pp. 57-58