

ADITYA SANKAR

Computer Science and Engineering
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Education

Ph.D. Student, Computer Science and Engineering, 2016 (Expected)

University of Washington, Seattle, WA. Advised by Steven M. Seitz.

Area of Research: *Graphics, Vision and Human-Computer Interaction*

M.S. Computer Science and Engineering, 2012

University of Washington, Seattle, WA

B.Tech. Information and Communication Technology, 2008

Dhirubhai Ambani Institute of Information and Communication Technology (DA-IICT), India

Skills

Languages C-family (C, C++, C#, Obj-C), Java

Scripting and Markup HTML, CSS, JavaScript, Python, LaTeX

Frameworks Unity, TensorFlow, .NET, Cocoa, OpenGL, MySQL, ASP, JSP

Design Photoshop, Premiere, Flash, Silverlight, WPF and a keen sense of aesthetics.

Projects & Research

In-situ CAD (Ongoing) – *Mentor: Steve Seitz (UW)*

Building a tablet application that enables users to capture the layout and contents (furniture, doors, windows etc.) of an indoor scene by using an in-situ augmented reality interface.

Capturing Indoor Scenes with Smartphones – *Mentor: Steve Seitz (UW)*

Designed and developed a novel smartphone application to easily create virtual tours and floor plan reconstructions of indoor scenes. The iPhone prototype uses data from the camera, gyroscope, accelerometer and magnetometer to help model the environment.

Rich Interactive Narratives – *Mentor: Joseph Joy (Microsoft Research)*

Contributed to the data models, interaction design and multimedia content for this project. RIN's combine storytelling with novel visualization technologies to create compelling interactive digital narratives. More at <http://www.digitalnarratives.net/>

Being John Malkovich – *Mentors: Steve Seitz & Ira Kemelmacher (UW)*

Conducted computer vision research that enables a user to control the facial expressions of a digital likeness of a celebrity, in realtime, using a webcam. The underlying technique analyzes frames from celebrity interview videos to create a convincing animation.

India Digital Heritage Project – *Mentors: P. Anandan & Joseph Joy (Microsoft Research)*

Primary designer and developer of a system that enables users to experience an interactive, immersive virtual tour of famous Indian Heritage sites, built using Photosynth and HDView technologies.

Publications

Proceedings and Patents

- A. Sankar, S. M. Seitz. In-Situ CAD Capture. *Proc. International Conference on Human-computer Interaction with Mobile Devices (MobileHCI)*, 2016, pp. 233–243
- A. Sankar, S. M. Seitz. Capturing Indoor Scenes with Smartphones. *Proc. ACM Symposium on User Interface Software and Technology (UIST)*, 2012, pp. 403–412.
- N. Adabala, N. Datha, J. Joy, C. Kulkarni, A. Manchepalli, A. Sankar, R. Walton. An Interactive Multimedia Framework for Digital Heritage Narratives. *Proc. Intl. Conf. on Multimedia (MM)*, 2010, pp. 1445–1448
- I. Kemelmacher-Shlizerman, A. Sankar, E. Shechtman, S. M. Seitz. Being John Malkovich. *Proc. Eur. Conf. on Computer Vision (ECCV)*, 2010, pp. 341–353
- A. Sankar, A. Prasad, J. Joy, N. Datha, A. Manchepalli. Digital Heritage. *Proc. of the 18th ACM Intl. Conf. on Multimedia (MM)*, 2010, pp. 1445–1448
- Indoor Scene Capture System*, A. Sankar, S. Seitz., filed, under review, 2014
- Sensor Fusion Interface for Multiple Sensor Input*, A. Sankar, W. Portnoy., US Patent Issued, 2016
- Experience Streams for Rich Interactive Narratives*, J. Joy, N. Datha, E. Stollnitz, A. Sankar, V. Krishnaswamy, S. Warriar, K. Rajanna, T. Joshi., US Patent Issued, 2015
- Generalized Interactive Narratives*, A. Sankar, J. Joy, A. Prasad, N. Datha., US Patent Issued, 2011

Experience

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| Research Assistant , <i>University of Washington, Seattle, WA</i> | Sep. 2009 – present |
| Research Intern , <i>Floored Inc, New York, NY</i> | June 2013 – Aug 2013 |
| Research Intern , <i>Microsoft Research</i> | Summer 2007, 2008, 2010, 2011 |
| Research Software Developer , <i>Microsoft Research India, Bangalore, India</i> | July 2008 – Aug 2009 |

Awards, Teaching, Service and Hobbies

- Teaching Assistant: Computer Graphics 2014/15, Virtual/Augmented Reality 2016
- UW C4C Invents Award, for contribution to technology commercialization, 2014
- Madrona Prize Winner, for research with best commercial potential, 2013
- Accenture Best Consumer Product Prize, UW Business Plan Competition, 2013
- Student Volunteer, Computer Supported Cooperative Work (CSCW) 2012, Seattle, WA
- Volunteered at development non-profits in India - HEALTH Inc., Sahaj
- Avid hiker, biker and climber. Interested in entrepreneurship and having real world impact.