Aditya Sankar

Computer Science and Engineering
University of Washington
Paul G. Allen Center
Seattle, WA 98195

Email: aditya@cs.washington.edu
Homepage: http://www.adityasankar.com/

Education

University of Washington, *Seattle, WA* 2017
Ph.D., Computer Science and Engineering
Advisor: Steve Seitz
Thesis: Interactive In-Situ Scene Capture on Mobile Devices
Research Interests: Graphics, Vision and Human-Computer Interaction

University of Washington, *Seattle, WA* 2012
M.S., Computer Science and Engineering

Dhirubhai Ambani Institute of Information and Communication Technology, *India* 2008
B.Tech., Information and Communication Technology

Skills

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

Scripting and Markup HTML, CSS, JavaScript, LaTeX

Frameworks Unity3D, TensorFlow, .NET, Cocoa, OpenGL, MySQL, ASP, JSP

Design Photoshop, Premiere, Silverlight, UIKit, WPF

Research Themes & Projects

Interactive In-Situ Scene Capture on Mobile Devices – *Advisor: Steve Seitz (UW)*
Explored novel techniques and systems that let non-expert users quickly and easily capture useful architectural visualizations of indoor scenes. The visualizations include virtual tours, 2D floor plans and 3D CAD models. The systems were implemented on a range of commodity mobile hardware, including phones, tablets, 3D-aware devices and head-mounted AR devices.

Preserving Heritage with Interactive Narratives – *Mentors: P. Anandan & Joseph Joy (Microsoft Research)*
Contributed data models, interaction design, system development, and multimedia content for a project to preserve natural and cultural heritage using Rich Interactive Narratives (RINs). RINs combine traditional forms of storytelling with new visualization technologies to create compelling interactive experiences. Was primary designer and developer of a pilot project that let users experience interactive, immersive, 3D virtual tours of famous Indian heritage sites.

Productivity Applications of Augmented and Virtual Reality
Interested in exploring productivity oriented applications of AR/VR. Built a system to create immersive 3D data visualizations in VR and interact with them using modalities such as gaze and head pose. Mentored students who were building instructional AR apps on Hololens for teaching skills such as cooking and piano playing.

Publications & Patents

A. Sankar, S. M. Seitz. Interactive Room Capture on 3D-Aware Mobile Devices. *Proc. ACM Symposium on User Interface Software and Technology (UIST)*, 2017, pp. 415–426

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. of ACM 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. *EA on Human Factors in Computing Systems (CHI)*, 2009, pp. 3503–3504

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. Warrier, K. Rajanna, T. Joshi., US Patent Issued, 2015

Generalized Interactive Narratives, A. Sankar, J. Joy, A. Prasad, N. Datha., US Patent Issued, 2011

Experience

Research Assistant, *University of Washington, Seattle, WA* Sep. 2009 – present

Research Intern, *Floored Inc, New York, NY* June 2013 – Aug 2013

Research Intern, *Microsoft Research (with multiple teams)* Summer 2007, 2008, 2010, 2011

Research Software Developer, *Microsoft Research India, Bangalore, India* July 2008 – Aug 2009

Awards, Teaching, Service & Hobbies

Teaching Assistant: Grad Computer Graphics 2014/15, Virtual/Augmented Reality 2016

Reviewer for TPAMI, SIGCHI, UIST, Mobile HCI, ISMAR, CVPR, DIS

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, CSCW 2012. Volunteer at HEALTH Inc. and Sahaj (social non-profits in India)

Avid hiker, biker and climber. Interested in entrepreneurship and real world impact of research.

References available on request. Last updated: February 8, 2018

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