

Rahul Garg

Research Engineer
Botsquare Inc.
47, Maiden Lane, San Francisco

Ph:(206) 708 5975
<http://www.rahulgarg.co>
email: rahul@botsquare.com

Education

- **University of Washington**, Seattle, WA **2007 - 2012**
Ph.D. in Computer Science and Engineering
Advisor: Prof. Steven M. Seitz
 - **Indian Institute of Technology (IIT) Delhi**, India **2003 - 2007**
Bachelor of Technology in Computer Science and Engineering
(GPA: 9.91/10.0, President's Gold Medal)
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Publications

- R. Garg and S.M. Seitz. **Dynamic Mosaics**, In Proc. of *3D Imaging, Modeling, Processing, Visualization, Transmission Conference (3DIMPVT)*, 2012
 - I. Kemelmacher-Shlizerman, E. Shechtman, R. Garg and S.M. Seitz. **Exploring Photobios**, *ACM Transactions on Graphics (Proceedings of SIGGRAPH 2011)*
 - R. Garg, D. Ramanan, S.M. Seitz and N. Snavely. **Where's Waldo: Matching People in Images of Crowds**, In *Proceedings of IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*, Colorado Springs, June 2011
 - R. Garg, H. Du, S.M. Seitz and N. Snavely. **The Dimensionality of Scene Appearance**, In *Proceedings of the IEEE International Conference on Computer Vision (ICCV)*, Kyoto, Japan, October 2009
 - N. Snavely, R. Garg, S.M. Seitz and R. Szeliski. **Finding Paths through the World's Photos**, *ACM Transactions on Graphics (Proceedings of SIGGRAPH 2008)*
 - M. Varma and R. Garg. **Locally Invariant Fractal Features for Statistical Texture Classification**, In *Proceedings of the IEEE International Conference on Computer Vision (ICCV)*, Rio De Janeiro, Brazil, October 2007
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Employment

- **Research Engineer at BotSquare Inc.** **June 2012 - Present**
Building gesture recognition systems.
- **Software Engineering Intern at Google Seattle** **June 2011 - September 2011**
Mentor: Prof. Steven M. Seitz
Prototyped an Android app that allows the user to take overlapping photos of a scene and browse them in an interactive viewer. A patent was filed for the approach.
- **Software Engineering Intern at Google Seattle** **March 2010 - September 2010**
Mentor: Prof. Steven M. Seitz
Implemented the Face Movie feature included in personal photo organizer software Picasa 3.8. Patented and extensively covered in press. Demo video has 1.5 M views on Youtube.
- **Research Intern at Microsoft Research Redmond** **June 2008 - September 2008**
Mentor: Dr. Richard Szeliski
Worked on the problem of detecting and matching features across images of man made scenes.

- **Research Engineer at B-Core Software Pvt. Ltd., New Delhi** **June 2007 - Aug 2007**

Worked on an application for mobile platforms to decode color codes from an image of a colored sequence (analogous to bar codes).

- **Research Intern at Microsoft Research India** **May 2006 - July 2006**

Mentor: Dr. Manik Varma

Developed locally invariant fractal features which allow for statistical analysis and classification of textures.

- **Summer Internship at IIT, Delhi** **May 2005 - July 2005**

Mentor: Prof. Subhashis Banerjee

Developed method to automatically detect vehicles in a video stream. Recipient of prestigious **SURA** (Summer Undergraduate Research Award), 2005 awarded by Industrial Research and Development Unit (IRD), IIT Delhi.

Thesis

- Unstructured Image Mosaics
R. Garg, PhD Thesis, Dept. of Computer Science and Engineering, University of Washington, 2012
- Locally Invariant Fractal Features for Statistical Texture Classification R. Garg, B.Tech Thesis, Dept. of Computer Science and Engineering, IIT Delhi, 2007

Teaching Experience

- TA for CSE455 (Undergraduate Computer Vision course) during Winter 2010 at University of Washington.
- Tutored undergraduate students at University of Washington.

Talks

- **Exploring Photobios** (with Ira Kemelmacher-Shlizerman)
SIGGRAPH 2011, Vancouver, BC, August 2011.
- **Finding Paths through the World's Photos** (with Noah Snavely)
SIGGRAPH 2008, Los Angeles, CA, August 2008.
- **Beyond Photo Tourism: Guided Navigation of Internet Photo Collections**
Indian Institute of Technology (IIT) Delhi, India, September 2008.

Academic Achievements

- Recipient of **NVIDIA Fellowship** for the year 2009-2010.
- Recipient of the **Weil Family Endowed Fellowship** for the year 2007-2008 at the University of Washington
- Recipient of the **Clairmont L. Egtvedt Fellowship** awarded by College of Engineering, University of Washington, 2007-2008
- Awarded the **President of India Gold Medal** for securing the highest cumulative GPA among all outgoing B.Tech. students across all disciplines in 2007 batch, IIT Delhi
- Secured All Indian **Rank 7** among 172,000 candidates in IIT-Joint Entrance Examination 2003

- Secured **Rank 1** in Common Engineering Test (Delhi) 2003, **Rank 18** in All India Engineering Entrance Examination 2003
- Selected for NTSE (National Talent Search Examination) Scholarship awarded by the Govt. of India
- Selected for Training Camp, Indian National Physics Olympiad 2003
- Awards in many mathematics contests - RMO (Regional Mathematics Olympiad), SMO (Senior Mathematics Olympiad), etc.

Programming Competitions

- Among **top 12** finalists in TopCoder Open 2008 Marathon competition, an **international** event hosted by www.topcoder.com.
 - Among **top 500** onsite finalists in Google Code Jam 2008, an **international** programming contest organized by Google.
 - Among **top 50** finalists in Google Code Jam India, 2006 - Programming Contest organized by Google which attracted over 14,000 participants from South East Asia.
 - Problem setter for International Online Programming Contest organized during Tryst 2007, the technical festival of IIT Delhi.
 - Represented IIT Delhi in ACM International Collegiate Programming Contest 2007.
 - Regular member of www.topcoder.com - a website hosting global programming competitions, ranked among **top 5** in India as an undergraduate.
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