

Hyunyoung Song

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EDUCATION

- AUG, 2004 - CURRENT UNIVERSITY OF MARYLAND, COLLEGE PARK, USA
Ph.D. Candidate in Computer Science Department
ADVISOR: Francois Guimbretiere
RESEARCH INTERESTS: Pen-based Computing Interfaces, Human Computer Interaction
SCHOLARSHIP: Ministry of Information and Communication, Republic of Korea (2 years)

RELEVANT COURSEWORK: Geometric Information System, Natural Language Processing, Scientific Computing, Information Visualization, Advanced Computer Graphics, Computational Geometry, Rapid Prototyping
- MAR, 1999 - JUL, 2003 SEOUL NATIONAL UNIVERSITY, SEOUL, KOREA
BACHELOR OF SCIENCE in Computer Science and Engineering Department
CLASS PERCENTILE: 94.7% (graduated Cum Laude)
SCHOLARSHIP: Seoul National University (1.5 year)

PROFESSIONAL EXPERIENCE

- JAN, 2006 - CURRENT GRADUATE RESEARCH ASSISTANT MD USA
Human Computer Interaction Lab, Computer Science Department, University of Maryland
Built MODEL CRAFT and PENLIGHT system using Anoto pattern technology
MODEL CRAFT is a plug-in for SolidWorks (a CAD program) that generates a 2D layout pattern of a 3D model. When a 2D layout is printed on Anoto pattern paper and folded to create a 3D model, users can create a sketch on a surface of the model using a digital pen with an embedded camera which recognizes the Anoto pattern.
PENLIGHT simulates a spatially-aware digital pen combined with a mobile projector to dynamically create visual overlay on top of a paper. Users can create virtual ink to collaborate with remote users. Users can also issue commands such as search and measurement while interacting with paper using the PenLight system.
- JUN - SEP, 2008, 2009 RESEARCH ASSISTANT INTERN ON CANADA
Autodesk Research Canada, supervised by George Fitzmaurice and Tovi Grossman
Exploring new digital pen applications on top of Autodesk products
- JUN, 2005 - AUG, 2005 RESEARCH ASSISTANT INTERN CA USA
Palo Alto Research Center, supervised by Lichan Hong and Ed Chi
Extended the 3Book (virtual book in 3D) application using VTK and Java
- SEP, 2004 - DEC, 2005 GRADUATE TEACHING ASSISTANT MD USA
Computer Science Department, University of Maryland, College Park, USA
Fall 2005 CMSC 660 Scientific Computing

Spring	2005	CMSC 460 Computational Methods	
Fall	2004	CMSC 466 Numerical Analysis	
JAN, 2004 - JUL, 2004		TECHNICAL RESEARCHER	SEOUL KOREA
		Service Development Laboratory, Korea Telecommunications Research Center	
		Developed middleware and web interface using SOAP, Tuxedo, PHP, Oracle	
JUNE, 2003 - SEP, 2003		RESEARCH ASSISTANT INTERN	KIHEUNG KOREA
		Human Computer Interaction Laboratory, Samsung Advanced Institution of Technology (SAIT)	
		Assisted writing "Multi-view 3D Face Descriptor" 2003 MPEG 7 proposal	
		Built the "Face Studio" for multi-angle face database	
JAN, 2002 - FEB, 2002		SOFTWARE ENGINEER	SEOUL KOREA
		Bio Informatics Laboratory, Biology Department, Seoul National University, Seoul, Korea	
		Developed database transaction module for PHYDIT (gene sequence editing application) using Java	
SEP, 2001 - DEC, 2001		TEXTBOOK TRANSLATOR (ENGLISH TO KOREAN)	SEOUL KOREA
		Publisher: Younghan Press (translated with 3 other coauthors)	
		Book info: Core Web Programming, Sun Microsystems Press, 2 nd edition	
JUN. 2001 - AUG, 2001		RESEARCH ASSISTANT	SEOUL KOREA
		Databases Laboratory, Seoul National University, Seoul Korea	
		Programmed XML testbed for the project "Performance of Relational Database and Object Oriented Database Performance on E-Market Transaction" using JDBC and MySQL	

PUBLICATIONS

"MODEL CRAFT FRAMEWORK: CAPTURING FREEHAND ANNOTATIONS AND EDITS TO FACILITATE THE DESIGN PROCESS USING DIGITAL PEN" Transactions on Computer Human Interface (TOCHI'09, Sept),

Hyunyoung Song, Francois Guimbretiere, Hod Lipson

"PENLIGHT: COMBINING A MOBILE PROJECTOR AND A DIGITAL PEN FOR DYNAMIC VISUAL OVERLAY" CHI'09, Boston MA, April 4-9, 2009, Hyunyoung Song, Tovi Grossman, George Fitzmaurice, Francois Guimbretiere, Azam Khan, Gordon Kurtenbach, Ramtin Attar

"CUBEEXPLORER: AN EVALUATION OF INTERACTION TECHNIQUES IN ARCHITECTURAL EDUCATION"

INTERACT 2007, Rio de Janeiro, September 10-14, 2007

Hyunyoung Song, Francois Guimbretiere, Michael Ambrose, Carl Lostritto

"MODEL CRAFT: CAPTURING FREEHAND ANNOTATIONS AND EDITS ON PHYSICAL 3D MODELS"

User Interface Software Technology (UIST), Montreux, Switzerland, October 15-18, 2006

Hyunyoung Song, Francois Guimbretiere, Hod Lipson, Chang Hu

"CONCEPT MAPS FOR ORAL HISTORY SEARCH AND USE"

Joint Conference on Digital Libraries (JCDL), Chapel Hill, North Carolina, USA, June 11-15, 2006

Ryen W. White, Hyunyoung Song and Jay Liu

ACADEMIC ACTIVITIES

Graduate Student Representative of Department Council Committee

Fall 2005 ~ Spring 2006

Graduate Student Representative of Education Committee

Fall 2005 ~ Spring 2006

COMPUTER SKILLS

PROGRAMMING LANGUAGES

C++, C, C#, Java

SCRIPTING LANGUAGES

PHP, Perl, JSP, ASP, JavaScript, Flash

GRAPHICS/VISION LIBRARIES

OpenGL, DirectX, Matlab (PDE toolbox, Imaging Toolbox), OpenCV

OPERATING SYSTEMS

Unix, Linux, Microsoft Windows XP, MacOS

DATABASES

MySQL, MSSQL, Oracle, Tuxedo

CITIZENSHIP AND IMMIGRATION STATUS

CITIZENSHIP:

Republic of Korea

US IMMIGRATION STATUS:

Student Visa (F-1)

REFERENCES

Personal references available upon request.