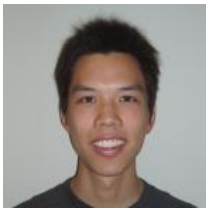

Matthew L. Lee

matthew.lee@cs.cmu.edu
http://www.cs.cmu.edu/~mllee
HCI Insitute, 5000 Forbes Avenue Pittsburgh, PA 15213

RESEARCH INTERESTS

Making Sense of Large Amount of Sensor Data, Ubiquitous Computing, Capture & Access, Human Memory, Cognitive Science, Eldercare

EDUCATION

Carnegie Mellon University — Pittsburgh, PA
Ph.D. Student in Human-Computer Interaction. — Fall 2005 – Present

University of California at Berkeley — Berkeley, CA
B.A. in Computer Science and Cognitive Science. 3.9 GPA. — Fall 1999 – Fall 2003

Oxford University, St. Catherine's College — Oxford, UK
Visiting Student (Hilary & Trinity Terms). — January 2002 – June 2002

EXPERIENCE

Graduate Student Researcher, Fall 2005 – Present
Carnegie Mellon University, Human-Computer Interaction Institute, Pittsburgh, PA

- Investigating how to create salient summaries of large amounts of data collected from ubiquitous sensing systems to make it usable and useful for users.
- Designed and developed a ubiquitous memory aid for people with early Alzheimer's disease and other memory impairments to restore their abilities to remember their experiences, slow the progression of cognitive decline, and reduce caregiver burden.
- Worked with end users to understand the value of embedded assessment technology for home health monitoring.
- Developed sensor platform based to track how frail adults perform instrumental activities of daily living. I am currently deploying the sensors and collecting data about everyday tasks of older adults, so that we can create salient summaries of long term data about task performance to increase the users' awareness of their own changing abilities.
- Advised by Professor Anind Dey.

Research Intern, September – December 2006
Microsoft Research Cambridge, Computer-Mediated Living Group, Cambridge, UK

- Investigated effects of varying cognitive support provided by a wearable camera system (Micrsoft SenseCam) on the memory abilities for a patient with severe memory loss.
- Mentors: Ken Wood, Steve Hodges, Georgina Browne & Emma Berry

Member of Technical Staff, March 2004 – July 2005
Oracle Corporation, ADF Faces Team, Redwood Shores, CA

- Designed and implemented a new interactive web widget toolkit and infrastructure used for building highly interactive web UIs.
- Integrated client-side AJAX functionality with JavaServer Faces server-side framework.

- Worked with Java community members to set JavaServer Faces standard.
- Critiqued user interface specifications.

Teaching Assistant, Fall 2003
UC Berkeley, EECS Department, Berkeley, CA
- Course: User Interface Design, Prototyping and Evaluation, Professor Jennifer Mankoff
- Mentored project groups in scoping out project plans, following through with implementation and evaluation.
- Wrote and graded assignments.

Senior Specialist Intern, Summer 2003
Lockheed Martin Corporation, Advanced Technology Center, Sunnyvale, CA
- Designed and developed infrastructure for 3D augmented reality visualization system.
- Integrated ARToolkit with OpenInventor graphics toolkit for improved rendering and interaction.
- Implemented virtual object selection using OpenInventor library.

Independent Research Participant, July 2002 – December 2003
Group for User Interface Research, EECS Department, UC Berkeley, CA
- Re-designed and evaluated an ink-based gesture recognition system to investigate gesture design by selection. Collaborator: Jason Hong.
- Implemented paper-based email system to investigate the benefits of combining the asynchronous nature of email with the physical artifact of paper. Advisor: Jen Mankoff.

Lab Assistant, Fall 2002
UC Berkeley, EECS Department, Berkeley, CA
- Course: Introduction to Symbolic Programming, Professor Dan Garcia
- Helped students learn the concepts of recursion, data structures, and functional programming in a hands-on environment.

Research and Development Intern, Summer 2001
BravoBrava!, Emeryville, CA
- Designed, implemented and evaluated "Multi-modal Interactive TV", a project that integrates aspects of natural user interfaces (speech, deictic, gesture, etc) into interactive television.
- Re-implemented "Champion e-Fridge" (CheF) using collaborative, peer-to-peer "CAB" architecture.

PAPERS, CHAPTERS, & POSTERS

2008 **Lee, M. L.** and Dey, A. K. Lifelogging memory appliance for people with episodic memory impairment. In *Proceedings of the 10th international Conference on Ubiquitous Computing* (Seoul, Korea, September 21 - 24, 2008). UbiComp '08, vol. 344. ACM, New York, NY, 44-53.

2008 **Lee, M. L.** and Dey, A. K. Wearable Experience Capture for People with Episodic Memory Impairment. Poster in *Proceedings of the international Symposium on Wearable Computing* (Pittsburgh, PA, September 28-30, 2008).

2007 **Lee, M. L.** and Dey, A. K. "Providing good memory cues for people with episodic memory impairment." In *Proceedings of the 9th international ACM SIGACCESS Conference on Computers and Accessibility*. ACM, New York, NY, 131-138.

2007 **Lee, M. L.** and Dey, A. K. "Capture and Access Lifelogging Assistive Technology for People with Episodic Memory Impairment." White Paper, presented at the Workshop on Intelligent Systems for Assisted Cognition, Rochester, NY, October 12-13, 2007.

2007 **Lee, M. L.** and Dey, A. K. "Capture and Access Lifelogging Assistive Technology for People with Episodic Memory Impairment." Poster presented at Pitt Institute of Aging Day, December 10, 2007.

2006 Torrey, C., **Lee, M.**, Burke, M. Dey, A., Fussell, S., and Kiesler, S., Connected Giving: Ordinary People Coordinating Disaster Relief on the Internet. HICSS 2007.

2006 Torrey, C., Burke, M., **Lee, M.**, Dey, A., Fussell, S., and Kiesler, S. Approaches to Authority in Online Disaster Relief Communities after Hurricane Katrina. Atwater, L. and Weisband, S. (Eds.). *Leadership at a Distance*. Erlbaum, 223-245.

2006 Dumitras, T., **Lee M.L.** & Quinones, P. TrinetraOCR: Augmented camera phone for the visually-impaired. Poster and demo presented at ISWC (International Symposium on Wearable Computing) 2006.

2006 **Lee, M.**, Dey, A. Capturing and Reviewing Context in Memory Aids. Presented at the Workshop on *Designing Technology for People with Cognitive Impairments*, CHI 2006.

2001 U.S. Patent: Multi-modal Interactive Television.

2001 J. Bing, J. Deubreil, J. Espanol, L. Julia, **M. Lee**, M. Loyer, and M. Sergine. MiTV: Rethinking Interactive TV. In *Proceedings of VSMM 2001, the Seventh International Conference on Virtual Systems and Multimedia*, pp 365-369.

TEACHING EXPERIENCE

Fall 2008	*Human-Computer Interaction Methods* (05-610), Teaching Assistant
Fall 2009	*Software Architectures for User Interfaces* (05-631), Teaching Assistant

STUDENT MENTORSHIP

Summer 2007	José Ramon Torres, University of Puerto Rico, c/o 2009, MemExerciser project
Spring 2008-2009	Akshay Goel, Carnegie Mellon, c/o 2009, MemExerciser project
Spring 2009	Joyce Xu, Carnegie Mellon undergraduate, Embedded Assessment project
Spring 2009	Rohith Salim, Carnegie Mellon undergraduate, Embedded Assessment project
Summer 2009	Jonpaul Zelik, Ohio State University undergraduate, MemExerciser project

FELLOWSHIPS

2006-8	**NSF IGERT Graduate Fellowship** in Assistive Technology
2006	**National Science Foundation** Graduate Research Fellowship, Honorable Mention

ACTIVITIES

2009	**CHI Works-in-Progress Committee Member**
2007-9	**Quality of Life Technology ERC** Research Co-Chair, Student Leadership Council
2007-8	**ACM SIGCHI** Student Member
2008-9	**CHI, Ubicomp, ISWC, Pervasive Conference,** Technical Paper Reviewer
2006-8	**CHI & Ubicomp Conference**, Student Volunteer

HONORS

2009	**Elevator Pitch Competition,** Quality of Life Technology Center, First place
2002	**Phi Beta Kappa,** Honor Society, UC Berkeley Chapter, Life Member.
1999 - 2003	**National Merit Scholarship**, Finalist and Scholar.
1999 - 2001	**California Alumni Leadership Scholarship**, Recipient.
2001	**National Society of Collegiate Scholars**, Life Member.
1999 - 2001	**Dean's List**, UC Berkeley
1999	**Edward Kraft Freshmen Award**

HOBBIES

Marathons, Motoring, Mountaineering, Maps, Mentoring, Macrons, Mandarin, Mass Transit