

LIHONG LI

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EDUCATION

- 2005 - present, PhD, Department of Computer Science, Rutgers University, USA
- 2002 - 2004, M.Sc., Department of Computing Science, University of Alberta, Canada
- 1998 - 2002, B.Eng., Department of Computer Science and Technology, Tsinghua University, China

WORKING AND TEACHING EXPERIENCE

May 2007	-	Aug 2007	research intern at Yahoo! Research NYC
May 2006	-	Aug 2006	engineer intern at Google NYC
Jan 2005	-	present	graduate research assistant at the Rutgers University
Sep 2002	-	Jul 2004	teaching/research assistant at the University of Alberta
May 2002	-	May 2002	programming language tutor at a professional training center
Jun 2000	-	Sep 2001	part-time software programmer
Jan 1999	-	Feb 1999	home tutor of college math

SELECTED GRADUATE COURSES

- **AI/ML:** Machine Learning (Greiner), Reinforcement Learning (Sutton), Learning and Sequential Decision Making (Littman), Introduction to Control System Theory (Sontag), Pattern Recognition (Kulikowski), Foundation of Knowledge Representation (McCarty), Abstraction and Hierarchies for Learning and Planning (Littman), Natural Language Processing (Kondrak), Bounded Rationality and Non-conventional Computing (Bulitko), Principles of Artificial Intelligence (Shan), Agent Communication and Architecture (Elio)
- **Optimization:** Nonlinear Programming (Shanno), Discrete Optimization (Boros), Network and Combinatorial Optimization (Zhou)
- **Algorithm/Theory:** Design and Analysis of Algorithms (Fredman), Foundations of Computer Science (Kilian), Complexity of Computation (Bogdanov), Hard Problems and Phase Transitions (Culberson), Automated Reasoning
- **Misc:** Numerical Analysis (Pai)

PROFESSIONAL SKILLS

- **Programming:** Primarily C/C++ and Java, some experience in other popular languages
- **Systems & Software:** MS Windows/Office, Linux/Unix, MS VC++ with MFC, Matlab, \LaTeX
- **AI/ML Expertise:**
 - Familiar with many popular AI/ML theories and techniques, including reinforcement learning, (partially observable) Markov decision processes, (hidden) Markov chains, decision-theoretic planning, statistical learning theory, PAC theory, SVMs, neural networks, decision trees, nearest neighbor learning, ensemble learning, Bayesian inference, EM, heuristic search, and online learning
 - General knowledge in data mining, graphical models, feature selection, dimensionality reduction, unsupervised learning, semi-supervised learning, game theory, and information theory

PROFESSIONAL ACTIVITIES

- Reviewer for the Journal of Machine Learning Research, AAAI'06, IJCAI'07, AAAI'08, and some workshops
- Oral or poster presentations at IJCAI'03, NIPS'03 (workshop), ECML'04, AAAI'05, ICML'06, and AI&Math'08

SELECTED PUBLICATIONS

Journal and Conference Papers

- L. Li and M.L. Littman: Efficient value-function approximation via online linear regression. In *the Tenth International Symposium on Artificial Intelligence and Mathematics (AI&Math)*, 2008.
- J. Wortman, Y. Vorobeychik, L. Li, and J. Langford: Maintaining equilibria during exploration in sponsored search auctions. In *the Third International Workshop on Internet and Network Economics (WINE)*, LNCS 4858, 2007.
- L. Li, V. Bulitko, and R. Greiner: Focus of attention in reinforcement learning. In *Journal of Universal Computer Science*, 13(9):1246–1269, 2007.
- T.J. Walsh, A. Nouri, L. Li, and M.L. Littman: Planning and learning in environments with delayed feedback. In *the Eighteenth European Conference on Machine Learning (ECML)*, LNCS 4701, 2007.
- R. Parr, C. Painter-Wakefield, L. Li, and M.L. Littman: Analyzing feature generation for value-function approximation. In *the Twenty-Fourth International Conference on Machine Learning (ICML)*, 2007.
- A.L. Strehl, L. Li, E. Wiewiora, J. Langford, and M.L. Littman: PAC model-free reinforcement learning. In *the Twenty-Third International Conference on Machine Learning (ICML)*, 2006.
- A.L. Strehl, L. Li, and M.L. Littman: Incremental model-based learners with formal learning-time guarantees. In *the Twenty-Second Conference on Uncertainty in Artificial Intelligence (UAI)*, 2006.
- A.L. Strehl, L. Li, and M.L. Littman: PAC reinforcement learning bounds for RTDP and Rand-RTDP. In *AAAI'06 Workshop on Learning for Search (AAAI technical report WS-06-11)*, 2006.
- L. Li, T.J. Walsh, and M.L. Littman: Towards a unified theory of state abstraction for MDPs. In *the Ninth International Symposium on Artificial Intelligence and Mathematics (AI&Math)*, 2006.
- L. Li, M.L. Littman: Lazy approximation for solving continuous finite-horizon MDPs. In *the Twentieth National Conference on Artificial Intelligence (AAAI)*, 2005.
- L. Li, V. Bulitko, and R. Greiner: Batch reinforcement learning with state importance (extended abstract). In *the Fifteenth European Conference on Machine Learning (ECML)*, LNCS 3201, 2004.
- V. Bulitko, L. Li, R. Greiner, and I. Levner: Lookahead pathologies for single agent search (poster paper). In *the Eighteenth International Joint Conference on Artificial Intelligence (IJCAI)*, 2003.
- I. Levner, V. Bulitko, L. Li, G. Lee, and R. Greiner: Towards automated creation of image interpretation systems. In *the Sixteenth Australian Joint Conference on Artificial Intelligence*, LNCS 2903, 2003.
- L. Li, V. Bulitko, R. Greiner, and I. Levner: Improving an adaptive image interpretation system by leveraging. In *the Eighth Australian and New Zealand Intelligent Information System Conference (ANZIIS)*, 2003.
- L. Li, M. Shao, Z. Zheng, C. He, and Z.-H. Du: Typical XML document transformation methods and an application system (in Chinese). *Computer Science*, 30(2):40–44, February, 2003.

Book

- Min Shao, Lihong Li, Zhenkun Zheng, and Chuan He: Practical Programming in XML. *Tsinghua University Press*, Beijing, China, December, 2002. ISBN 7-900643-85-0.

Theses

- Lihong Li: Focus of Attention in Reinforcement Learning. *MSc thesis*, Department of Computing Science, University of Alberta, Edmonton, Alberta, Canada, July, 2004.
- Lihong Li: Design and implementation of an agent communication module based on KQML. *Bachelor degree thesis*, Department of Computer Science and Technology, Tsinghua University, Beijing, China, June, 2002.

REFERENCES

Available upon request.