

# Yew Jin, Lim

Software Engineer

Google, Inc.  
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## Objective

R&D career in dynamic IT environment working on challenging real-life applications

## Research Interests

High performance computing, machine learning, Bayesian data analysis, game AI

## Education

Jan 2003 — Sep 2007 **National University of Singapore (NUS)**

Republic of Singapore.

Ph.D. in Computer Science

Supervisor: Associate Professor Lee Wee Sun

Cumulative Average Point (CAP): 4.42 / 5.0

**PhD Dissertation** - On Forward Pruning in Game-Tree Search

Game-tree search is a common technique used in game-playing programs. However, the number of nodes to search grows exponentially with increasing depth. Forward pruning, or selective search, is thus often used in game programs to reduce the number of nodes searched. In this research, we present theoretical analyses and practical algorithms on forward pruning techniques for games.

Sep 1997 — May 2000 **University of Waterloo**

Ontario, Canada.

Double Honors in Computer Science and Pure Mathematics

B.Math (with Distinction)

Cumulative Average: 82.5% (Equivalent to A-)

## Skills

- Programming Languages: C, C++, Python, Perl (Intermediate), Java (Intermediate), Matlab (Basic)
- C++ Libraries: Boost, STL, Altivec (Vectorized Parallel Computing), MPI
- Database: Basic MySQL administration, SQL (Basic)
- Operating Systems: Mac OS X, Linux
- System Administration: Mac OS X Server (Basic)

## Experience

### Software Engineer, Google, Inc. (Mountain View) — Nov 2007 - Present

Working in Search Quality group on Cross Language Information Retrieval.

### Research Fellow, NUS — Jan 2007 - Sep 2007

Pursued independent R&D on real-time strategy (RTS) game AI and collaborative filtering

### Teaching Assistant, NUS — 2006

Led reading groups, taught tutorials, created and graded problem sets for students in CS3243 (Foundations of AI) and CS2305S (Problem Solving in Computing)

### Ad hoc Reviewer

IEEE Transactions on Neural Networks, ICML 2006

### Co-Supervisor, Undergraduate Research Opportunities Programme — 2006

Co-supervised two undergraduates in their research projects

### Mentor, NUS-SMP (Science Mentorship Programmes) — 2005

Mentored a project with high school students for “Adaptation using evolutionary algorithms for motion-based games”

### Teaching Assistant, University of Waterloo — 1999-2000

Tutored students and marked assignments for Linear Algebra 1 and Calculus 1, 2

### Naval Officer, Republic of Singapore Navy — Jul 2000-Nov 2002

Graduated from Officer Cadet School with “Best in Seamanship”, produced IT solutions to automate tedious tasks and supervised a team of military personnel. Currently serving as a Lieutenant in the Singapore military reserve force.

## Honors/Awards

May 2007	Team Leader of NUS entry to ORTS Game AI Competition 2007 that won “Strategic Combat” and “Tactical Combat” categories
Mar 2007	Dean’s Graduate Award
Jan 2003 — Jan 2007	A*Star-NUS Graduate Fellowship
2006	AAAI-06 Scholarship
2006, 2005	Apple Student Scholarship to WWDC 2005 and 2006
2003	IEEE NNS 2003 Student Travel Grant for CEC 2003
Fall 1997, Winter 1998	University of Waterloo Term Dean’s Honours List

## Sponsorship

2006 Initiated and facilitated a loan of 4 XServe G5s from Apple computers for student projects.

## Publications

- Y. J. Lim, and Y. W. Teh, *Variational Bayesian Approach to Movie Rating Prediction*. KDD Cup and Workshop 2007.
- Y. J. Lim, and W. S. Lee, *Properties of Forward Pruning in Game-Tree Search*, AAAI 2006

- Y. J. Lim, and W. S. Lee, *RankCut -- A Domain Independent Forward Pruning Method for Games*, AAAI 2006
- Y. J. Lim, and J. Nievergelt, *Computing Tigers and Goats*, ICGA Journal, Vol. 27, No. 3, pp. 131-141, 2004
- W. C. Oon, and Y. J. Lim, *An Investigation on Piece Differential Information in Co- Evolution on Games Using Kalah*, Proceedings of Congress on Evolutionary Computation (CEC2003), Vol. 3, pp. 1632-1638, 2003

### Submitted Papers

- Y. J. Lim, and J. Nievergelt, *Tigers and Goats is a draw*, Games of No Chance 3. To Appear.

### Talks

- *Forward Pruning in Game-Tree Search*. Seminar. School of Computing, NUS. 13 June 2006
- *Tigers and Goats*. Combinatorial Game Theory Workshop, BIRS, Alberta, Canada. 18–23 Jun 2005
- *Tigers, Goats, and Pruning*. AI Seminar, University of Alberta, Alberta, Canada, 16 Jun 2005

### Professional Affiliations

- IEEE Student Member since Aug 2003
- ACM Member since Oct 2004

### Notable Personal Activities

- Dunman High School (Alma mater) Career Guidance Talk in Computer Science. 21 Sep 2007.
- Submitted an entry (forwardPruner) written in Python to Netflix prize (<http://www.netflixprize.com>) that achieves a 5.71% improvement over Netflix's CineMatch program
- Completed OSIM Triathlon in 2006
- Volunteer for Bloggers.SG 2005 (Blogging Convention)
- Volunteer for Youth Apprentice organized by Mensa Singapore, 2005
- Secretary, macNUS, National University of Singapore, Semester 1 2005
- Completed Standard Chartered Marathon (42.195 km) in 2004 and 2005
- Chairman, Singapore-Malaysia Association, University of Waterloo, 1998

### Language Proficiency

English (fluent), Mandarin (conversational)