

# Xi (Alice) Gao

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## Research Interests

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- Prediction Markets, Game Theory, Artificial Intelligence, Strategic Decision Making
- I enjoy exploring problems aimed at understanding fundamental structures of complex interactions and processes. I am attracted to problems that are theoretical in nature but are closely tied to practical applications.

## Education

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September 2008 ~ Present Harvard University, Cambridge  
PhD, Computer Science, Advisor: Yiling Chen

2003 ~ 2008 University of British Columbia, Canada  
Bachelor of Science, Combined Honors of Computer Science and Mathematics  
Major GPA: 92%, Overall GPA: 90%

## Research Experience

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CS299r Research Project: Betting on Infinite or Continuous Outcome Spaces 2008 ~ 2009

- Supervisor: Yiling Chen
- Developing and analyzing prediction market mechanisms for betting on infinite or continuous outcome spaces

CS353r Research Project: Learning Graphical Games from Data 2008

- Supervisor: Avrom J. Pfeffer
- Devising algorithms for learning graphical games with inspiration from algorithms for learning Bayesian Networks

Undergraduate Honours Thesis Project 2007 ~ 2008

- Supervisor: Kevin Leyton-Brown, Collaborator: Erik Zawadzki
- B.Sc. Thesis: *Building a Software Simulator for Urban Traffic Systems*
- Surveyed previous game-theoretic studies of vehicle and traffic signal interactions, and built simulator for investigating game-theoretic vehicle behaviours in urban traffic systems

Extreme Blue Technical Intern, IBM Canada Ltd. 2007

- Received NSERC Industrial Grant for research on the IMS technology
- Researched and implemented Java solution to perform user and service provisioning on the IP Multimedia Subsystem (IMS) network using Tivoli Provisioning Manager
- Delivered a business-oriented presentation with my team members to IBM executives at IBM Extreme Blue North America Expo in Armonk, New York

## Teaching Experience

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Undergraduate Teaching/Academic Assistant, UBC 2004 ~ 2008

- Held regular office hours for junior students to discuss course related problems
- Supervised and graded students for weekly circuit design and implementation lab projects

## **Awards and Honors**

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2008	Graduate Student Fellowship, Harvard Graduate School of Arts and Sciences
2007	Computer Science Scholarship, Charles and Jane Banks Scholarship, Trek Excellence Scholarship for Continuing Students, UBC
2007	NSERC Industrial Grant for research at IBM Canada Ltd.
2007	Third prize in Canadian National Final Competition, Microsoft Imagine Cup 2007
2006	Science Scholar, Undergraduate Scholar Program Scholarship, UBC
2003 ~ 2005	Dean's Honor List, Undergraduate Scholar Program Scholarship, J Fred Muir Memorial Scholarship in Science, UBC
2002 and 2003	Certificate of Distinction for Euclid Mathematics Contest (top 25%), Certificate of Distinction for American Mathematics Contest

## **Technical Experience**

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Software Developer, Visiphor Corporation, Burnaby, BC May ~ October 2006

- Integrated the Microsoft Enterprise Library Framework into Briyante Integration Environment for Logging/Tracing, Database Access, and Exception Handling capabilities

Java Course Projects, UBC 2003 ~ 2006

- Implemented Sudoku-solver using arc consistency and depth-first search algorithms for Introduction to Artificial Intelligence course
- Implemented with a partner a GUI application and a backend Oracle database for managing retail transactions including cash purchase, credit card purchase, merchandise return, and inventory update for Introduction to Relational Database course

System Quality Assurance Engineer, Agilent Technologies Inc., Burnaby, BC January ~ August 2005

- Researched and implemented a Tcl script component for simulating/testing Multicast VPN
- Investigated, designed and implemented/enhanced a GUI Test Automation Framework with documentation and presentation

## **Relevant Courses**

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- Topics at the Interface between CS and Econ, Efficient Algorithms, Network Design Projects, Advanced Algorithms Design and Analysis, Introduction to Artificial Intelligence

## **Technical Skills**

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- Java, C#, C++, C, LaTeX, Tcl/Tk, JavaScript, Eclipse, Microsoft Visual Studio, Linux

## **Extracurricular Activities:**

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Languages: Proficient in Mandarin Chinese

Activities Reading, ballroom dancing, swimming, traveling