MAYA HARIDASAN

4162 Upson Hall
Department of Computer Science
Cornell University
Ithaca, NY 14850

Office: (607) 255-2219
Cell phone: (607) 379-2219
maya@cs.cornell.edu
http://www.cs.cornell.edu/~maya

Objective

I am interested in designing and building high-performance applications that are efficient, reliable, and easy to use. Towards this goal, I would like to obtain a position that will allow me to work on innovative tools tackling concrete challenges faced by industry.

Education

2003 - 2008
(Expected - August)

Ph.D. in Computer Science GPA: 4.0 (Max 4.3)
Minor in Information Science
Cornell University, Ithaca, NY
Advisor: Robbert van Renesse

2007

M.S. in Computer Science GPA 4.0 (Max 4.3)
Cornell University, Ithaca, NY
Advisor: Robbert van Renesse

1998 - 2003

B.S. in Computer Science GPA 4.6 (Max 5.0)
University of Brasilia, Brazil

Research and Industrial Experience

Research Assistant
Cornell University

Participated in multiple projects within the Distributed Systems Group in the Department of Computer Science at Cornell University, under guidance of Robbert van Renesse, Werner Vogels and Ken Birman. *(2004 – 2007)*

Software Engineer
Amazon.com, Inc.

Interned with the Distributed Systems Group, led by Werner Vogels (CTO of *Amazon.com*). Worked in the design and initial implementation of the Dynamo system, a large-scale reliable distributed storage system. Was responsible for the implementation of the local storage component, using the Berkeley DB storage system. *(Summer 2005)*

Software Engineer
Cjr - Junior Enterprise

Co-founded and worked as software engineer in a student-based consulting and software development company (CJr), supported by the University of Brasilia, Brazil. Held the lead development role in a third-party project for designing and implementing a graphical tool for inputting, modifying, and analyzing graphs. *(2001 – 2003)*

Teaching Experience

Teaching Assistant
Cornell University

- Advanced Computer Systems *(Fall 2005)*
- Data Structures and Functional Programming *(Fall 2003, Spring 2004)*

Teaching Assistant
University of Brasilia

- Computer Organization and Design *(2000-2001)*
- Introduction to Parallel Processing *(2002-2003)*

Publications

[1] Maya Haridasan, Robbert van Renesse. **Gossip-based Distribution Estimation in Peer-to-Peer Networks.** *In Submission.*

[2] Lori Lorigo, Maya Haridasan, Hronn Brynjarsdottir, Ling Xia, Laura Granka, Fabio Pellacini, Helene Hembrooke, Bing Pan, Geri Gay. **Eye Tracking and Online Search: Lessons Learned and Challenges Ahead.** Journal of the American Society for Information Science and Technology (JASIST). *In Press.*

[3] Maya Haridasan, Ingrid Jansch-Porto, Ken Birman, Robbert van Renesse. **Enforcing Fairness in a Live-Streaming System.** 15th Annual Conference on Multimedia Computing and Networking (MMCN), 2008.

[4] Maya Haridasan, Robbert van Renesse. **SecureStream: An Intrusion-Tolerant Protocol for Live-Streaming Dissemination.** Journal of Computer Communications. Special issue on Foundations of P2P Computing. Elsevier 2007.

[5] Maya Haridasan, Robbert van Renesse. **Defense against Intrusion in a Live Streaming Multicast System.** 6th International Conference on Peer-to-Peer Computing (P2P), 2006.

[6] Maya Haridasan, Gerson H. Pfitscher. **PM2P: A Tool for Performance Monitoring of Message Passing Applications in COTS PC Clusters.** 15th Symposium on Computer Architecture and High Performance Computing (SBAC-PAD), 2003.

[7] Maya Haridasan, Gerson H. Pfitscher. **Use of the Parallel Port to Measure MPI Intertask Communication Costs in COTS PC Clusters.** 17th IEEE International Parallel and Distributed Processing Symposium (IPDPS), 2003.

Research Projects @ Cornell University

WS-Notification Specs	Implemented and analyzed the WS-Notification family of specifications, a set of standards that define a Web services approach to notification of events using a topic-based publish/subscribe pattern. *(Summer 2004)*
Emulab Testbed Installation	Led a project for configuring and setting up both hardware and software in an initial installation of *Emulab* on a local cluster with 252 blade processors at Cornell University. Emulab is a popular network testbed that provides researchers with a wide range of environments in which to develop and evaluate distributed systems. *(2004-2005)*
P2P-Based Video Streaming System	As a project leader, investigated security aspects of P2P streaming, where all peers receiving the video also contribute with resources to disseminate the contents being streamed. Implemented and evaluated a streaming system resilient to opportunistic nodes that do not contribute with upload resources, potentially affecting the quality of the stream. *(2005-2007)*
Gossip-based Distribution Estimation	As a project leader, designed and evaluated an efficient system based on gossip that allows all nodes in a distributed setting to estimate the distribution of values held by all other nodes. Currently implementing a toolkit for distribution. *(2007-2008)*
Use of Eye-Tracking to Study Web-Search Behavior	As a team member, participated in web-search behavioral studies using eye-tracking technology to measure users' ocular indices, in collaboration with the Information Science Department at Cornell University. Developed the proxy used to manipulate data presented to users in the experiments and scripts to analyze the collected data. *(2006-2007)*

Relevant Graduate Courses

CS614 Advanced Computer Systems, CS611 Advanced Programming Languages, CS681 Analysis of Algorithms, CS612 Compiler Design for High-Performance Architectures, CS714 Peer-to-Peer Systems, CS621 Matrix Computations, CIS640 Advanced Human Computer Interaction Design

Technical Skills

- **Programming Languages**:
  - **C, C#, Java**: Implemented several course and research projects (data structures, file systems, graphics computing, parallel and distributed computing), ranging from a few thousands to tens of thousands of lines of code.
  - **Delphi**: Implemented a large project for a third-party during undergraduate studies. Project involved graph algorithms and a graphical visualization interface.
  - **Python**: Implemented a resilient peer-to-peer live-streaming video dissemination system, tolerant to variable contribution rates from peers.
  - **Perl**: Wrote several scripts for post-processing data collected in research experiments. Also, wrote a proxy for manipulating an experimental setup in which results returned by a web search engine were manipulated before being presented to participants in a study.
  - **SML**: As a teaching assistant, taught sections on SML to junior and senior undergraduate students, and graded projects written on SML.
  - **MPI/PVM**: Experience with parallel programming in clusters of computers. Implemented a parallel version of the conjugate gradients algorithm to speed execution of an applied mechanical engineering program.
  - **MIPS, CISC assembly language**: wrote sections of code for a computer organization and architecture class.
- **Web Design using Html, CSS**
  - Experience with modifying existing search result pages to present masked search engine results to participants in controlled experiments.
  - Designed and created personal web pages.
- **Unix-based platforms**
  - Experience using Linux as a platform for development and evaluation of several research projects.
  - Experience with installation and trouble-shooting of different Linux versions and configuring different services, during effort for installing an emulation testbed on a cluster of blade servers at Cornel University.

Spoken Languages

Portuguese (Native Speaker), English (Fluent), Malayalam (Fluent), Hindi (Intermediate), Russian (Beginner)

References

References available upon request.