

 **GREG J BADROS**

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Objective To make the world and workplace better through the application of advanced computing technologies to life and industry.

Education UNIVERSITY OF WASHINGTON, 1996–2000 Seattle, WA
Dept. of Computer Science and Engineering
Dissertation: *Extending Interactive Graphical Applications with Constraints*
Ph.D. Degree received, June 2000 (Advisor: Alan Borning)
Master's thesis: *A Framework for Preprocessor-Aware C Source Code Analyses*
M.Sc. Degree received, June 1998 (Advisor: David Notkin)

DUKE UNIVERSITY, 1991–1995 Durham, NC
Graduated Magna Cum Laude and Phi Beta Kappa, May 1995
Majors: Mathematics and Computer Science
Cumulative GPA: 3.8 (4.0 in Computer Science Major)

Research interests Programmer productivity, user interfaces and experience, programming languages, systems and product design, software engineering, constraints, semi-structured data (e.g., XML), and web technologies including protocols and service-oriented architectures.

Professional experience *Proven expertise in designing, implementing, evolving, and re-engineering large, scalable, multi-threaded, multi-tiered reliable systems, both consumer-facing and infrastructure, and managing and growing large teams that do the same. Extensive experience with engineering, product and business concerns and how they interrelate.*

FACEBOOK Palo Alto, CA
Director of Engineering June 2009 – Present
Helping lead our advertising and data infrastructure initiatives, along with developing the overall engineering culture, architecture, and vision.

GOOGLE INC. Mountain View, CA
Sr. Director of Engineering March 2003 – June 2009
Feb 2007 – June 2009: Responsible for Gmail, Calendar, Reader, Orkut; towards the end, my focus was on the application Platform technology stack.

May 2004 – Feb 2007: Responsible for US \$4 Billion per year AdSense technology that enables partner advertising solutions including AdSense For Content (AFC).

As individual contributor (**Senior Staff Engineer**), worked on numerous pieces of infrastructure and customer-facing products.

Winner of four Founders awards and two Executive Management Group (EMG) awards.

INFOSPACE, INC. (FORMERLY GO2NET, INC.) Bellevue, WA
Chief Technical Architect March 2000 – February 2003

Responsibilities include defining and implementing common architectural subsystems, organizing and overseeing code and architecture re-use, establishing and evangelizing best practices, and raising the bar on all aspects of engineering (a division of about 150). I've led multiple engineering platform integrations as InfoSpace has acquired various companies, and led a team of about twenty in rebuilding our server platform and presentation engine from the ground up. Additionally, I mentor and train our development leads, review designs of major new products, and set our general technical direction for the engineering organization.

UNIVERSITY OF WASHINGTON Seattle, WA
Research Assistant September 1996 – June 2000.

Funded by National Science Foundation Graduate Research Fellowship and the W. Bradley Fellowship. Research includes work with Alan Borning and David Notkin.

MONASH UNIVERSITY Melbourne, Victoria Australia
Visiting Researcher February 1999 – May 1999

Worked with Professors Kim Marriott and Peter Stuckey on applying constraint technologies to the World Wide Web and page layout.

UNIVERSITY OF WASHINGTON Seattle, WA
Lecturer, CSE-341 – Programming Languages Summer 1999.

Received post-course student evaluations of 4.84 (of 5.0, where 5 is "Excellent" and 4 is "Very good") for "Instructor's contribution to course" and a 4.53 for the course as a whole.

PRENTICE HALL, UNIVERSITY OF WASHINGTON Seattle, WA
Instructor, Video Instructor and Technical Editor Spring and Summer 1998.

Advanced C Programming Instructional Videotape Series and UW Extension University. Was fully responsible for the technical content and interactive presentation of a twelve-part videotape series for University of Washington Extension University students. In spring 1998, taught the class to UW Extension students, including lectures, project design, grading, and exams.

UNIVERSITY OF WASHINGTON Seattle, WA
Teaching Assistant Spring and Winter 1998.

CSE-341 (Programming Languages) and CSE-595 (Graduate Human-Computer User Interfaces). Worked with Professors Alan Borning and Jonathan Grudin. Prepared and delivered lectures, ran quiz sections, assisted in development of tests and homeworks, and graded.

TRANSWORLD NUMERICS, INC. Durham, NC
Senior Research Scientist May 1995 – December 1996.

First engineer at the startup, performing research and programming on various numerical algorithms and projects involving financial market analysis and investment. Led a team of three engineers to deliver a complete working production system in under five months.

MICROSOFT CORPORATION, DESKTOP APPLICATIONS DIVISION Redmond, WA
Software Design Engineer Intern Summer 1994.

Worked on Excel spreadsheet product. Position involved feature design, specification, review, implementation, and testing. Received “Outstanding” post-internship-review rating.

JOHNS HOPKINS UNIVERSITY, CENTER FOR TALENTED YOUTH Baltimore, MD
Teaching assistant Summer 1993.

“Data Structures and Algorithms” and “Digital Logic” courses. Involved extensive lecturing, curriculum planning, test preparation and grading of homeworks and programs.

DUKE UNIVERSITY Durham, NC
Teaching assistant Spring 1993.

Introductory Pascal programming course. Supported students on projects and graded.

**Job-related
abilities**

In depth mastery of various computer programming languages including:

- C++ (since 1991) and C (since 1987)
- Java (since 1997), C#/.net (since 2001), and SmallTalk (since 1996)
- Perl, Awk and Sed (since 1993)
- XSLT (since 1999)
- Scheme, Lisp, and Emacs-Lisp (since 1994)
- Pascal, 65xx/8502 Assembly (since 1986)

Proficiency with numerous other languages including SQL, Python, JavaScript, Ruby, Visual Basic, Tcl/Tk, PostScript, Eiffel, Prolog, CLP(*R*), Haskell, ML, and Vax Assembly.

Highly skilled in developing scalable, portable high-performance applications targeting multiple operating systems including:

- GNU/Linux (since Nov. 1993), Solaris, AIX, IRIX, HP/UX
- Microsoft Windows 2000/NT/XP/Vista

**Activities
and awards**

International World Wide Web Conference Program Committee (2002–2006)
University of Washington CSE Department Wilma Bradley Fellowship (1999–2000)
National Science Foundation Graduate Research Fellow (1996–1999)
IEEE National Programming Competition—1st place (1995)
ACM International Collegiate Programming Competition—1st place in USA (1993–1994)
RedHat Free Desktop Competition—1st place (1996)
President of Canterbury Dormitory (1993-1994)
Duke University Intramural Tennis Champion—Singles (Fall 1992)
Associated Students of Duke University Parliamentarian (1991-1992)

Selected publications and reports (most are available from my home page)

Refereed conferences and journals:

“An Empirical Analysis of C Preprocessor Use.” *IEEE Transactions on Software Engineering*. Dec. 2002.

“A Constraint Extension to Scalable Vector Graphics.” *Tenth International World Wide Web Conference*. Hong Kong. May 2001.

“SCWM: An Extensible Constraint-Enabled Window Manager.” *Freenix track of USENIX Technical Conference*. Boston. June 2001.

“The Cassowary Linear Constraint Solving Algorithm.” *ACM Transactions on Computer-Human Interaction*. Accepted October 2000.

“JavaML: A Markup Language for Java Source Code.” *Ninth International World Wide Web Conference*. Amsterdam. May 2000.

“SCWM—An Intelligent Constraint-Enabled Window Manager.” *AAAI Spring Symposium on Smart Graphics*. Palo Alto, California. March 2000.

“A Framework for Preprocessor-Aware C Source Code Analyses.” *Software Practice and Experience*, Vol. 30, Issue 8. July 2000.

“Constraint Cascading Style Sheets for the Web.” *Proceedings of the ACM Conference on User Interface Software and Technology*. Asheville, NC. November 1999.

“Data Compression Techniques for Stock Market Prediction.” *Proceedings of the 1994 Data Compression Conference*. Snowbird, Utah. March 29-31, 1994.

Technical reports and other:

“Extending Interactive Graphical Applications with Constraints.” Ph.D. Thesis, University of Washington Department of Computer Science and Engineering. May 2000.

“The Extensible Templating Language: An XML-based Restricted Markup-Generating Language.” Submitted to *The Twelfth International Conference on the World Wide Web*. May 2003.

“Constraint Cascading Style Sheets.” Developer’s day talk at *Eighth International World Wide Web Conference*. Toronto. May 1999.

“The Cassowary Linear Arithmetic Constraint Solving Algorithm: Interface and Implementation.” Technical Report UW-CSE-98-06-04, June 1998

“Constraints in Interactive Graphical Applications.” Ph.D. General Exam. Dec. 1998.

“An Enhanced Disk-Caching NFS Implementation for Linux” *Proceedings of the 1998 Linux Expo*. Durham, NC. May 1998.

“PCp³: A C Front End for Preprocessor Analysis and Transformation.” Masters Thesis. October 1997.

“Genetic Algorithms.” *Vertices* (Duke University Science and Engineering Magazine). Fall 1994.