Resume: Joel Ossher

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Objective

- Looking for a research-oriented internship in software engineering, programming languages or related fields for summer 2008.

Education

- Second year graduate student in PhD program in Informatics at University of California, Irvine. *Advisor*: Crista Lopes. (started September 2006) GPA: 4.0
- BA in Computer Science and Psychology from Cornell University (June 2006). GPA: 4.03 (Straight A's is 4.0)

Experience

- **UCI Research Assistant with Professor Crista Lopes**
  September 2006 to present
  I am a member of the research group working on Sourcerer (http://sourcerer.ics.uci.edu/), an infrastructure for the large-scale analysis of open source code. The system works by extracting various functional properties from the code and building up an indexed database that can then be queried. I worked on the specialized Java parser for extracting this information in the face of incomplete and partially incorrect programs, as well as a system for automatically slicing a compilable subset of any program.
- **Google Summer Intern**
  Summer 2007
  I worked on a web-based user-facing management console as part of Google's AdSense for Audio (http://www.google.com/adsense/audio/). I contributed directly to the UI design of the program, as well as make numerous improvements to the back-end, all of which were reflected in a live product. I worked closely with the other engineers in my group, as well as with the quality assurance engineers assigned to the project.
- **Green Hills Software Summer Intern**
  Summer 2005
  I designed and built a cross-platform help viewer for the Green Hills MULTI IDE. My help viewer was included in future releases of the MULTI IDE as the default help viewing solution. I was given complete control over the design of the system as well as what additional features to implement. My performance was such that I was offered a full-time position at the end of the summer.
- **IBM Research Summer Intern with Dr. Mark Wegman and Dr. V.T. Rajan**
  Summers 2003 and 2004
  I worked in a group focused on combating spam, where my time was divided between implementing one approach to spam filtering and building a test harness through which a variety of different approaches can be tested, compared, and combined. I suggested and designed some refinements to the spam filtering algorithm as well as some features of the test harness. Both a patent and a publication resulted from this work.
- **Cornell University Undergraduate Researcher with Professor Johannes Gehrke**
  September 2004 to June 2006
  http://www.cs.cornell.edu/database/cougar/index.php
  The goal of the project was to develop a system to utilize a novel method for efficiently computing query results similar to those of standard publish-subscribe systems. My work was to help design both the input language and the overall system architecture, as well as implement a section of the system up to deployment level standards.
- **Cornell University Undergraduate Teaching Assistant**
  Introduction to the Analysis of Algorithms. (Spring 2005 and 2006)
  Discrete Structures. (Fall 2003 through Spring 2006)

Introduction to Theory of Computing – Honors. (Fall 2005)
I did an uncommonly large amount of TAing as an undergraduate. I held office hours once a week and participated in grading.

- **Cornell University Undergraduate Researcher with Professor Johannes Gehrke**
January 2003 to June 2004
The project was investigating the use of a distributed database system on a mobile sensor network. I initially worked on designing and implementing a Java user interface from which queries can be sent and their results displayed and interpreted. Later I helped develop a platform on which some novel routing and power management techniques developed by the group could easily be implemented and tested.
- **Cornell University Undergraduate Researcher in Cognitive Linguistics**
January 2004 to June 2004
The goal of the project was to observe and classify how gesture is used as a metaphorical supplement to spoken language. I helped with the classification, as well as with building a database system through which gestures could be compared across speakers.
- **High School Science Research in Artificial Intelligence for 3D Tic-Tac-Toe**
2000 to 2002
Worked under the mentorship of Dr. V. T. Rajan (IBM T.J. Watson Research Center) developing an algorithm for three-dimensional tic-tac-toe, and writing an applet through which a user could play against the computer. This was a high school science research project which earned me a position as semifinalist in the Intel Science Talent Search.

Publications

- Lemos, O., Bajracharya, S., and Ossher, J. 2007. **CodeGenie:: a tool for test-driven source code search.** In *Companion To the 22nd ACM SIGPLAN Conference on Object Oriented Programming Systems and Applications Companion.* Montreal, Quebec, Canada.
- Lemos, O. A., Bajracharya, S. K., Ossher, J., Morla, R. S., Masiero, P. C., Baldi, P., and Lopes, C. V. 2007. **CodeGenie: using test-cases to search and reuse source code.** In *Proceedings of the Twenty-Second IEEE/ACM international Conference on Automated Software Engineering.* Atlanta, Georgia, USA.
- Brenna, L., Demers, A., Gehrke, J., Hong, M., Ossher, J., Panda, B., Riedewald, M., Thatte, M., and White, W. 2007. **Cayuga: a high-performance event processing engine.** In *Proceedings of the 2007 ACM SIGMOD international Conference on Management of Data.* Beijing, China.
- Leiba, B., Ossher, J., Rajan, V.T., Segal R., and Wegman, M. 2005. **SMTP Path Analysis.** *CEAS 2005.* Stanford University, California, USA

Patents

- Leiba, B., Ossher, J., Rajan V.T., Segal, R., Wegman, M. **Method and system for recognizing spam email.** U.S. Patent Application 20070185960, Auguest 9, 2007
- Rajan, V.T., Wegman, M., Segal, R., Crawford, J., Ossher, J., Kephart, J. **Detecting spam e-amil using similarity calculations**. U.S. Patent Application 20060149820, July 6, 2006

Honors

- 1st place in the OOPSLA 2007 Student Research Competition along with Otavio Lemos and Sushil Bajracharya
- Recipient of UC Irvine ICS Dean's Fellowship
- Cornell College of Arts and Sciences Dean’s List every semester attended.
- Member of Cornell Presidential Research Scholars, one of the Cornell commitment programs designed to aid in undergraduate research. (http://www.commitment.cornell.edu/cprs/).
- Recipient of IBM TJ Watson Scholarship, 2002 – 2006
- Recipient of New York State Scholarship for Academic Excellence, 2002 – 2006
- Semifinalist in Intel Science Talent Search, 2001 – 2002.

Skills

- Expert in Java, C++, SML, Matlab and JavaScript, with Perl, Python and SQL experience
- Practiced in GUI development, both application-based (Swing and SWT), web-based (AJAX, GWT, Java Servlets), and custom (Green Hills windowing environment)
- Experienced in XML, HTML and CSS
- Extensively used Eclipse, Jazz, JUnit, CVS, and Subversion
- Windows, Linux and Unix development experience

References – Available upon request