

# Jonathan Bell

2920 Broadway, 1426 Lerner Hall  
New York, NY 10027

Phone XXX-XXX-XXXX  
Cell XXX-XXX-XXXX  
[jsb2125@columbia.edu](mailto:jsb2125@columbia.edu)

## EDUCATION

Columbia University School of Engineering and Applied Science, New York, NY      GPA: 3.76 (3.84 in major)  
    B.S. in Computer Science, 2010 (Anticipated), 121.5 credit-hours completed  
    Dean's List  
Amity Regional High School, Woodbridge, CT      2002-2006      GPA: 3.71

## WORK EXPERIENCE

**Teaching Assistant, Advanced Software Engineering, Columbia University, New York, NY      9/09-12/09**  
Provided support to 30 students debugging and integrating EJB applications as well as understanding the key design principles presented in lecture. Graded student designs, programs, and documentation.

**Intern, Software Engineering, Codestreet, LLC, New York, NY      4/08-4/09**  
Re-engineered SQL Server-based reporting solution for company's flagship product and expanded automated business intelligence reporting to provide additional strategic information to clients. Worked with SQL Server and Visual Studio in a primarily Windows environment.

**Intern, Software Engineering, MediaMerx, New York, NY      2/08 - 4/08**  
Worked with the CEO and CTO to architect and implement an online video distribution product. Documented and implemented use cases to build the product with PHP, MySQL, XML, and Flash.

**Intern, Operations Analysis, Sikorsky Aircraft, Stratford, CT      5-8/07**  
Worked as lead programmer in a team creating a simulator for natural and terrorist disaster response. Worked in Java with Eclipse, ArgoUML, CVS, and JavaDoc.

**Systems Manager and Developer, Columbia University: Office of the Dean, New York, NY      9/06-Present**  
Designed, maintained, and implemented custom web applications for internal school use and the high availability servers to run them. Planned the initial purchase and installation of 50 Apple Mac Pro workstations, 4 Apple XServe servers and 4 Linux servers. Configured servers and clients for a high performance lab environment.

## LEADERSHIP EXPERIENCE

**Community Programming Assistant - Columbia University Office of Residential Programs      9/08-Present**  
Serve as a peer mentor for 16 Resident Assistants, providing monthly building-wide activities for 500 residents. Also participate in an on-call schedule to serve as a first-line in response to student crises.

**Vice President - Columbia Chapter of the Association for Computing Machinery      9/08-4/09**  
Created monthly academic-oriented events for the Computer Science student community at Columbia. Past events include research fairs, programming contests, and gaming competitions.

## PUBLICATIONS

S. Sheth, J. Bell, G. Kaiser. *CPU Torrent - CPU Cycle Offloading to Reduce User Wait Time and Provider Resource Requirements*. Submitted 11/25 to The 30th International Conference on Distributed Computing Systems.

## SKILLS

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<b>Programming Languages</b>	Fluent: Java, PHP, HTML, CSS, JavaScript Proficient: SQL, Perl, XML, FLEX/AS3, C-Lisp, C#, C/C++, Visual Basic
<b>Design Concepts/Tools</b>	Fluent: Eclipse, UML, JavaDoc, NetBeans, SOAP, AJAX, Photoshop/Illustrator Proficient: Propel, Symfony, GlassFish/Java EE/EJB 3 Familiar: VisualStudio, CogTool
<b>Server Technologies</b>	Fluent: Apache, Linux Administration, MySQL, Mac OS X Server Proficient: qmail, SpamAssasin, PostgreSQL, Oracle, SQL Server, Zimbra Server

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## COMPUTER SCIENCE COURSEWORK

Operating Systems	(Sp 10)	Introduction to Database Systems	A
Software and Security Exploits	(Sp 10)	Artificial Intelligence	A-
Projects in Computer Science II	(Sp 10)	Computational Linear Algebra	A-
Projects in Computer Science	A	Fundamentals of Computer Systems	A-
Programming & Problem Solving	A	Computer Science Theory	B+
User Interface Design	A-	Scientific Computation	A+
Web Enhanced Information Management	A+	Data Structures and Algorithms	A+
Programming Languages and Translators	B+	Advanced Programming	A+
Visual Interfaces to Computers	A-	Discrete Mathematics	B
Computer Networks	B	Object Oriented Programming and Design	A
Advanced Software Engineering	A+		

## PROJECTS

- ▶ Extended the genSpace collaborative bio-informatics platform to include chat and screen-sharing features for “Projects in Computer Science,” Prof G. Kaiser
- ▶ Created an empirical simulator for the CPUTORrent cycle offloading system for “Projects in Computer Science,” Prof G. Kaiser
- ▶ Benchmarked the Symfony PHP Framework and compared it to “vanilla” programming for “Web enHanced Information Management,” Prof G. Kaiser
- ▶ Created “VIEWS” - a laser-pointer based drawing interface (using a webcam and projector) for “Visual Interfaces to Computers,” Prof J. Kender
- ▶ Architected and implemented “Snow” - a programming language for genetic algorithms for “Programming Languages and Translators,” Prof A. Aho
- ▶ Led team to create “SketchFactor” - an online multiplayer pictionary game written in Java EE with Glassfish for “Advanced Software Engineering,” Prof G. Kaiser
- ▶ Designed and implemented an expert system for vitamin deficiency diagnosis with a rule-based interpreter in Lisp for “Artificial Intelligence,” Prof A. Pasik
- ▶ Led team to develop and implement an educational interface to an onsite weather station for a Harlem elementary school with PHP, XML, and MySQL for “Design Fundamentals Using Advanced Computer Technology,” Prof J. McGourty

## INTERESTS AND ACTIVITIES

- ▶ Photography
- ▶ Skiing, sailing, bicycling
- ▶ Science Fiction Literature