

Scott Baldwin

www.etherice.com

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Profile

I am hard-working, self-motivated, ambitious, creative, and passionate about everything I do. I like to solve challenging problems and work in fast-paced environments. I work well in groups as a leader and as an effective team player. I have excellent communication and presentation skills. I learn new technologies quickly. For more information, please visit my website: www.etherice.com

Education

August 2002 – May 2006

The University of Missouri – Columbia

- **B.S., Computer Science, Cum Laude**
- Math Minor
- Business Minor
- **3.58 GPA** (Cumulative)
- **3.71 GPA** (Computer Science)

Experience

Goldman Sachs, NYC

September 2006 – Present

- Analyst, Equities Technology Division
- Design and Development of Core Router for Electronic Trading Systems
- Client-side, Exchange-side, OMS and ECN connectivity

University of Missouri CDS, Columbia MO

September 2005 – June 2006

- Software and Website Development
- Incorporate Web into marketing strategy

Freelance Web Design

2001 – 2006

- Design complete Websites to the client's specification
- Develop E-commerce solutions

Awards and Recognition

First Place, 2005 Database Management Systems contest at University of Missouri

Second Place, 2005 Annual DMC Web Design Competition

NACUFS (nacufs.org) "Website of the Month" recognition, May 2005

Rex M. Whitton Memorial Engineering Scholarship

Cum Laude graduation honors from the College of Engineering at MU

Skills

OS: Windows (all versions), several UNIX variants (especially Linux)

Languages: C, C++, MFC, Java, Javascript, PHP, Perl, MySQL, XHTML, CSS

Apps: Visual Studio.net, Java NetBeans IDE, Microsoft Office, Adobe Photoshop, Macromedia Flash, servers (HTTP, FTP, SOCKS, SMB, SMTP)

Core strengths: Software development, Web services, MySQL databases

I also have excellent communication, problem solving, and leadership skills.

References are available upon request.

C/C++ Development

→ My current project at Goldman Sachs is developing an intelligent, low-latency router that provides seamless connectivity between Clients, Exchanges, Order Management Systems, Electronic Crossing and Algorithmic Trading engines. As of July 2007, approximately 50 instances of the router are running in production, with high-profile clients sending multi-billion-dollar order flows through daily.

→ Designed and implemented a C-like compiler from scratch, using tools such as lex and yacc. It was the final project for a Compilers course. For more info, please visit www.etherice.com/about/compiler.php.

→ Extended a lightweight, multi-threaded SOCKS v4 proxy server by enabling it with SOCKS v5 support. I used the official SOCKS 5 RFC to add the version 5 protocol extensions. The server is rock-solid and can scale to at least a hundred simultaneous connections on an average PC.

→ Developed an experimental access control system for XML in standard C++ using libxml. My approach used XML's own capabilities to define access controls, making it unnecessary to modify any part of the current XML standard. For more info, please visit www.etherice.com/about/xmlacl.php.

→ Developed a SMB/CIFS/Windows Network search system called LiquidLan. The official Website of the project is <http://www.liquidlan.net/>, and the final report is available at [this link](#). The server component runs on Linux and scans SMB/CIFS networks for public file shares and adds them to a database. It listens on a TCP/IP socket for search requests from computers running the client. For thread management on the client side, I sub-classed a generic threadpool class into special-purpose thread pools for search requests and file transfers. All of the networking is asynchronous (through non-blocking socket I/O). The code is over 40,000 lines, and consists of roughly 60 C++ classes! I have not yet released the source code and binaries for public use, but when it's production-ready I plan to.

Java Development

I have experience with its language constructs, API, threading, exception handling, and NetBeans IDE. I have taken a total of 5 Java programming courses and received an "A" in all 5.

I have written a lot of programs for class assignments and recreation, including a spreadsheet application, a lightweight Web server, and an experimental GUI-based application that modeled different aspects of population growth.

Last year, I led a 3-person team in developing a multi-threaded game server, and a full implementation of the Chinese board game known as [Go \(or Weiqi in Chinese\)](#). The server creates game rooms that an unlimited number of players can join over a network via an application client we developed (similar to Yahoo! Games). Players can create new game sessions, advertise them, and play in tournaments. The server has a command line interface, and the client has a Swing-based GUI. My team's implementation was the only one that passed all five of the professor's automated correctness tests (the automation was possible because he provided interfaces for it). The combined code base size of the client and server is over 7000 lines. While other teams had bigger solutions (more code), our project employed design patterns and principles that resulted in a clean, elegant solution that was easy to modify and extend throughout each stage. As a result, it received the highest score according to the professor. I also received an A+ in the course.

PHP/MySQL Development

I have developed many dynamic Websites and Web applications in PHP that make use of MySQL. I have also installed, configured, and maintained my own MySQL server in Linux.

One of the more notable PHP Web applications I developed (that made extensive use of MySQL) was for the term project of a DBMS course. I was project manager and lead developer for the task. My team's project was an interactive menu management and presentation system. It had a secure management interface and a beautiful, feature-rich, "Web 2.0" front-end. You can see the demo at [this link](#). My team won the award for best project (and we competed against a class full of graduate students). To read more about the award, visit [this link](#).

Website Development

Please visit <http://www.etherice.com/resume/#web> for information about notable Websites I have developed.