

Brett M. Gmoser

90 Middleton Road Apartment 6 • Bohemia • NY • 11716
Cellular 631-664-7261 • bgmoser@codexterous.com

OBJECTIVE

To obtain a full-time or contract position as a software engineer in an organization which would benefit from my initiative, capabilities, and contribution.

SUMMARY

An accomplished and highly dedicated software and database design engineer with proven skills and expertise. Have demonstrated substantial technical depth in many areas of software development, including well developed planning, analytical, and communication skills at a consistently high level of performance and competence. Expansive knowledge of various standards, Internet protocols, and programming best practices. Experienced in various Internet and web technologies, including the development of cross-platform client and server solutions for high-availability environments.

EXPERIENCE

Senior Software Engineer, 1/07 to Present *Lead Bid, Inc.*, Hauppauge, NY

- Responsible for all aspects of the design, implementation, and patenting of “Lead Bid” (US #8,010,416); an innovative platform solution which connects buyers and sellers of real-time sales leads in the automotive and insurance industries.
- Developed in C++ for use in a high availability, multi-threaded heavy use environment where the company’s API routinely handles upwards of 2,000 hits per second.
- Plan and deploy high availability server cluster using horizontal architecture consisting of seventeen FreeBSD servers with load balancing. Utilize CARP for fail-over on proxies. Cluster includes twelve web servers, two database servers, two mail servers, a security and logging hub, and two load balancers.
- Processes which handle API are heavily multi-threaded, with twelve instances of the application with eight hundred threads each across ten web servers (thread and process count calculated based on hardware available). The applications communicate with the web server C:\temp\software using FastCGI protocol, with a Python script managing the spawning and re-spawning of the processes.
- Developed “lockd”, a highly scalable application responsible for named lock synchronization between servers and processes. Maintains an average of 8,000 connected clients, and uses Boost ASIO for TCP/IP communication, Boost Spirit for parsing client input and commands, and Boost Thread (now part of C++11) for multi-threading. The service is mission critical and has never crashed in roughly two years of service.
- Advanced platform features include customizable business rules, remote audit logging, real-time graphical statistical reports, billing infrastructure, and more.
- Platform includes a PCI compliant payment system which securely stores customer billing information, including credit card numbers, interfacing with a third party gateway.
- System aggregates and catalogs name, address and financial data for all sales leads.
- Utilize Python for many smaller tasks including report creation, map generation using SVG graphic format, and various system availability checks.
- Embedded python (using the Boost Python library) is used to handle tasks inside the API which are frequently maintained, including integration with third party client APIs.

Software Engineer, 9/06 to Present

Cyber-Lead, Inc., Hauppauge, NY

- Promote new company-wide software development and testing procedures, including version control use and regression testing. Implemented many performance enhancements to existing code. Factorized and sanitized HTML/JavaScript code, enabling full cross-browser compatibility and functionality.
- Develop custom C++ CGI framework for use with various internal web projects. All web site code is C++, utilizing “under the hood” knowledge of web technologies.
- Developed “Rigel”, a custom templating language for use on the web. Originally conceived as a variable replacement language, Rigel eventually evolved into a dynamically typed functional programming language with variables (dictionary, list, string, integers, and other types), conditionals, functions, and loops. Uses Boost Spirit for parsing, along with a technique praised by the creator of the library.

Contract Consultant, President, 3/04 to Present Codexterous, Bohemia, NY

- Designed and developed various software solutions for clients. Major projects included:
 - TrueDB – Complete analysis, architecture, development and deployment of a custom-made and highly efficient interpreted programming language in order to meet the specific needs of the client.
 - IMBot – An innovative tool for marketing to users of Yahoo! Instant Messenger. Reverse engineered three different protocols. The end result is a tool which was both highly innovative in the industry space and highly efficient for users. Utilizes wxWidgets for a cross-platform GUI, usable after compilation on Windows, UNIX-style operating systems such as Linux, and Mac OS.
 - Alcamo Pools – Develop, design and support Microsoft Windows software in C++ (raw WIN32 API) to create and store customer estimates.
 - Article marketing – Utilizing extensive research in the search engine marketing field, develop a custom content management system designed from the ground up with SEO as the primary design paradigm. Other objectives included traffic generation and easy categorization of articles.

Software Engineer, Technician, 11/03 to 9/06 Airway Communications, Deer Park, NY

- Develop Microsoft Windows software in C++ to assist with repair paperwork, thus helping to increase productivity by over one hundred percent, and greatly reduce the amount of errors in such paperwork.

SKILLS

- **C/C++** – Expert; Currently used/10 years. Experience with boost C++ libraries (ASIO, Spirit/Karma/Phoenix, Xpressive, GIL, Interprocess, IOStreams, Locale, Python, Test, etc.), templates, OOP, STL, TCP/IP, UDP, Microsoft Windows API, COM, various third party libraries, multi-threaded design, concurrency and locking mechanisms, debugging, code analysis and documentation, other modern programming idioms such as RAII, generic programming, object factories and exception safety.
- **Python programming language** – Advanced knowledge; Currently used/5 years. Knowledge of Boost Python library (integration of Python into C++, used to create Python modules from C++ code as well as embed Python in C++ software).
- **WxWidgets** – Intermediate; Currently used/5 years. A cross-platform GUI library. Chosen for its “native” look and feel across supported operating systems.
- **Regular Expressions** – Expert; Currently used/8 years.
- **HTML/XHTML/XML/CSS/JavaScript/CGI** – Working knowledge; Currently used/8 years. Well versed in all areas of web development including UI design, shopping carts, back-end development, SEO, and modern web development practices such as AJAX.
- **MySQL and relational database design** – Expert; Currently used/10 years. Experience with relevant programmer APIs, stored procedures, triggers, functions, indexes, InnoDB, MyISAM, document indexing and information retrieval, and more. Have worked with various forks of MySQL (MariaDB, Drizzle and its attractively licensed client API), PostgreSQL, and MSSQL.
- **NoSQL** – Working knowledge; Currently used/2 years. Have utilized CouchDB, memcached, and experimented with Facebook’s Cassandra for use in high traffic environments.
- **GNU development environment (GCC et al.)** – Advanced knowledge; Currently used/7 years. Includes experience with autotools, gdb, GCC C and C++ compilers.
- **Linux, FreeBSD and UNIX-like environments** – Advanced knowledge; Currently used/10 years. Experience includes a strong background in FreeBSD system administration, Apache and Nginx web servers, mail server configuration (Postfix, Dovecot), version control (SVN, CVS), CARP. Working knowledge of the Bourne Again Bash Shell (bash), VI/VIM editors. Advanced knowledge of configurations for various UNIX services such as nginx and Apache web server, OpenSSL, OpenSSH, bind, postfix, OpenVPN, and others.

REFERENCES

An extensive list of personal and professional references is available upon request.