

LARRY SMITH

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In a sense I have two resumes below.

The first is a letter of recommendation from my current employer. A signed .pdf of this is available upon request.

The second is my actual resume. The summary section from it is duplicated below.

Summary

Starting with a B. Math from the University of Waterloo, over the span of my career I have done almost everything. From programming an 8 bit CPU (in assembler and without an operating system) to threading in a multicore environment. From developing a tape copying utility for the University to writing software with tens of thousands of lines of source code. From DOS to Windows to Windows 8. From Fortran to C to C++ to C#, and beyond.

In addition to my programming and analysis skills, my communications skills are excellent. I've mentored my colleagues and given presentations to customers throughout my career, including a presentation to the president of a mainframe company.

Bottom line – Very experienced technically, especially in the design and implementation of Microsoft technologies. With a proven track record of being on target in multiple projects over multiple lines of business, my employers and customers (e.g. Bartizan, Coopers & Lybrand, Lever Brothers, Harper Collins Publishers, IBM, Royal Bank of Canada and others) have found my work highly satisfactory, well written and clearly documented.

I'm looking for a position involving (preferably) C#, although other environments (e.g. C++) are possible. My preferred locations are Westchester, southern Connecticut or Manhattan. I am *not* looking for a web developer's job. Been there, done that, didn't really enjoy it. Back-end processing to support a web application is fine (e.g. web services, database updates, utility classes, etc), as are desktop apps.



Recommendation for Larry Smith – February 2012

Larry Smith has worked for me since 2001 as a Senior Software Analyst.

Our company is downsizing and outsourcing our development. I regret that this has prompted Larry to look for employment elsewhere. His knowledge, skills and experience will be greatly missed.

He is friendly, outgoing and a team player. He's always ready to share his expertise and has mentored all his co-workers. His grasp of computer matters is deep, and he has the communications skills to be able to transfer his understanding to others. He is a superb teacher.

Also, he writes extensive documentation and specifications, both as code comments and in word processing documents.

In software, he has always been ahead of the pack, specializing mostly in Microsoft products. As a small company, we've been fairly conservative in embracing new technologies. But while we were using Visual Basic and Win32, he led us into using C# and .NET, which we've never regretted.

He has imagination and has provided us with several innovative ideas over the years. To give just a few examples:

- When we needed a scripting language for one of our products, he showed us how we could use IronPython, with a suitable GUI to generate code for it.
- Years ago, in Visual Basic, he designed and implemented a tabbed user control that allowed end users to specify complex AND/OR queries in a natural way.
- His knowledge of SQL Server let us track updates to our database (with no programming changes), allowing us to debug our code and also verify the performance of our database design.

He designed, documented and implemented our forthcoming Customized Email System (which includes a mail-merge feature), while working as a project manager for our outsourcing company on the project.

18 months ago he took over responsibility for our web portal, www.leadslightning.com, working partly as a developer, but mostly as an architect and as a project manager. One of his previous major contributions to that project was the Importer web service that brought data into our database (which he co-designed). Due to the lack of standards in our industry, this is a much more complex process than it would be otherwise.

He has had a notable experience outside our company. He was a technical reviewer on two of Charles Petzold's books.

In summary, over the years his excellence in software design and implementation has enabled us to create and improve our products. He will be missed.

Please feel free to contact me if you have any questions.

Ayman Ahmed

Partner and Chief Technology Officer

914-965-7977 x103

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Resume Highlights

- 10 years of experience with C# and .NET
- Fluent in C#, C/C++, VB 6, Assembler language for several architectures, and knowledgeable in many other secondary languages (F#, Powershell, VB.NET, (Iron)Python, Perl, Java, etc)
- Was an architect and developer on many projects. See the rest of the resume for details.
- Knowledgeable in ASP.NET and proficient in SQL Server.
- Experienced in Win32 API programming for over 20 years, including calling it from C#.
- Technical previewer for two of Charles Petzold's books (*3D Programming for Windows* and *The Annotated Turing*).
- Several mathematics and academic awards. See the Education and Honors section at the end of the resume for details.

Detailed Work Experience

Bartizan Connects 2001- Present

Senior Software Analyst

- Bartizan is in the Trade Show Lead Retrieval industry. If you've ever been to a trade show and had your badge swiped, scanned or tapped into a mobile device, you may have been involved with software I've written.
- LeadsLightning.com – Our web site that allows Exhibitors and Show Management to upload data on attendees, capture leads, and filter and view them as tables, graphs, etc
 - Wrote a complex (due to the lack of standards in the Trade Show industry) data import/update web service. The routine also has to perform well. Currently the database contains data on over 4 million attendee leads.
 - Designed and implemented a component that allowed real-time access to attendee scans. As leads were imported into our database, the data could be echoed to (suitably authorized) third party web services.

- Have been in charge of the ASP.NET / C# / JScript development for the web site for the last 18 months.
- Most recently have designed, implemented and did project management (overseeing an outsourcing team) on a customized email project. This will allow exhibitors to create email templates that are customizable (e.g. “Dear [[First Name]], ...”) and send them out to attendees.
- WIALink – Under contract with the New York State Department of Labor (NYSDOL), designed and implemented a C# application to allow their end users to automatically transfer data from one of their web sites to a local Access database (see *Activity Track* below) for querying and reporting purposes. IE was used as a control and the process was automated by programmatically generating keystrokes, keeping state as we went from page to page, scraping the data via the IE DOM.
 - The DOL application was an early user of AJAX. This complicated the program because the web page fields were being updated asynchronously as the individual AJAX calls ended. Detecting when all AJAX calls were complete was crucial to ensuring that the data was accurate.
 - Multithreading was key to the design, to cope with the asynchronous aspect of the web pages involved.
- Activity Track – Again under contract to the NYSDOL, co-developed a Microsoft Access system used by the agency to assist job seekers.
 - Designed and implemented a control that would let end users construct complex Boolean queries in a very user-friendly way.
 - Redesigned the data import processing step, dropping the elapsed time from minutes to seconds.
 - Also sped up the database queries significantly by identifying missing indexes.
 - Designed and implemented an export facility that dumped database data in XML format for external processing.
 - Wrote a Help system for the program, and authored all the Help files using RoboHelp.
- BadgeMax – Designed and implemented a C#-based drag-and-drop application to let end users retrieve data from either an Access database or an Excel spreadsheet and let them design and edit badges for Trade Show attendees.
 - Implemented IronPython as a way to allow end users to dynamically adapt their badges as they print. The script had access to our internal objects so we could, say, make an “Exhibitor” label on the badge visible or not. Building and editing the IronPython script was via a GUI so the user never saw the actual IronPython source code.
 - Wrote three user manuals for various aspects of the program. The largest was over 100 pages long.
- BartBlock – Designed and implemented a Browser Helper Object (BHO) in C# that allowed software to run browser-based software in a public kiosk without allowing the user to access any other applications.
- Designed, implemented and documented a C++ DLL that allowed end-user programmers to access data inside one of our lead retrieval data collection terminals using raw sockets to talk to the device’s Ethernet port. The API supported multiple simultaneous users and ensured that updates were done in a safe, consistent fashion. The documentation file I wrote for this was over 60 pages long.
- Wrote various internal utilities and documents, including
 - A small Access-based data dictionary for the Activity Track project, retrieving and formatting database schema information, and displaying formatted SQL queries using a finite-state machine approach.
 - Produce formatted reports showing what Sql Server database tables and fields were changed when running unmodified programs. The actual data was shown, and any field that was changed had its old and new data highlighted.
 - Took Visual Studio IntelliTrace data from a monitored run and produced a filterable report on the data.
 - Wrote a Visual Studio macro to put `/** ... */` boxes around multi-line comments. It would reflow the comments after editing them to remain inside the box boundaries.
 - Authored a 14 page document detailing our coding standards. This was used internally, but also given to our outsourced developers to ensure a consistent coding style.

Coopers & Lybrand (later PricewaterhouseCoopers, now part of IBM) 1993 - 2001

Senior Consultant

- Using approaches developed in conjunction with Supply Chain Analysts, designed and implemented a Forecasting System for Lever Brothers using Microsoft Access and C++. In addition to providing a new forecasting methodology, a number of other features were included, such as tracking and evaluating Forecast Accuracy. The

system consisted of about 8000 lines of code and required multiple passes over 1.4 million input records each week. Because of the amount of data involved, careful attention was paid to performance. After just a few months of operation, customer service levels reached a 15 year high, and savings were estimated at \$25M per year.

- Developed a Microsoft Access-based uncertainty model to perform complex analyses to evaluate the range of likely impacts of a new Customer Service/Pricing program for Lever Brothers.
- Developed an account-based profit-and-loss statement capability for Lever Brothers.
- Designed and implemented a system for T.J. Lipton which analyzed data from a survey of their customers. The results of this processing were presented to the Steering Committee of this billion dollar company. The software used was Borland's Paradox database system.
- Acted as an internal consultant. This included being a programming resource, answering questions posed by other Coopers' consultants. It also consisted of doing Technical Interviews for potential new hires, evaluating their abilities on Visual Basic, Microsoft Access, C, C++, the Windows SDK, etc.
- Performed a Technical Evaluation on a commercial Unix-based Inventory Control system on behalf of a potential user of the system. The system consisted of 7000 C modules using Oracle. The user wanted an evaluation done before buying a source code license for the system. Based on my recommendations, the user substantially modified their development plans when they were informed about significant product weaknesses. These included an almost total lack of system documentation and the lack of any kind of Application Programming Interface (API). This meant that to implement their desired enhancements they would have to modify core code, thus quickly getting out of synch with future vendor enhancements to the system.
- Designed and implemented an Order Entry system running under Windows using Visual Basic. The database used was Microsoft Access as implemented in VB 3.0 Professional Edition. Because the system ran on laptops, performance was a key issue. The system also interfaced with a custom MS-Mail / Microsoft Access application to send and receive data from a Windows/NT Advanced Server host. The customer was the book publisher Harper Collins.
- Performed a Technical Assessment of an in-house VM/CMS based APL system consisting of thousands of subroutines. The objective was to evaluate the current system and determine whether to maintain it or to migrate it to a different environment, such as client/server. The customer was Metropolitan Life Insurance Co.

Systemsmith Consultants 1990 - 1993

President

- Produced a management report on the feasibility of merging two corporate data centers. These were the Toronto Star newspaper and Harlequin Books (both owned by TorStar Ltd). This included creating initial capacity plans for both shops, and preparing a 5 year Cost/Benefit Analysis.
- Co-authored a VM/DOS to MVS conversion proposal for the Toronto Star.
- Tracked down file corruption problems on a Burroughs mini-computer system. These were eventually identified as design flaws in the Operating System. Because of the severe customer impact involved, reports were made directly to the president of Burroughs Canada.
- Subsequently designed alternate methods to ensure file integrity in the above Burroughs system. This involved a checkpointing mechanism which would alert the customer when the Operating System had corrupted the files so file restores could be done when necessary. A system monitoring/accounting system was also designed and implemented to determine resource usage for later application tuning purposes.

IBM Canada Ltd., 1989 - 1990

Systems Engineer

- Team Leader on an OS/2 Extended Edition-based concentrator/gateway which allows OEM terminals to communicate with mainframes as SNA LU 6.2 terminals. The package is designed for Continuous System Operation (24 hours a day, 365 days a year), and supports real-time backup via a Mate PS/2 which would transparently assume control of all terminals in case of a crash. This project was done for Canada's two largest airlines to allow them to support older reservation terminals in their new SNA environment. The product was in daily use across Canada supporting thousands of terminals on multiple PS/2s.
 - Designed, coded, integrated and documented a series of routines used by all other product components. These modules included extensions to OS/2 such as routines for specialized buffer management, semaphores, and timer services. Also included were interfaces to allow the programmers to more easily access advanced OS/2 features such as shared memory and inter-process communication.
 - Provided "Platform Support" for the entire project team as its primary resource for internal consulting. This made use of my comprehensive background knowledge to advise team members and management on almost all technical aspects of the platform on which we were developing the software. On the hardware side this required expertise in PS/2s, hard disks, printers, Token Ring LAN, etc. For software it included support for OS/2, DOS, the Microsoft/IBM C compiler, and VM and MVS connectivity, as well as Operating System techniques such as multitasking, multiple address space programming and the proper way to use semaphores to avoid deadlock conditions.
- This project was a continuation of the work which had been started under contract from IBM by Aratek (see below). It was moved over to the direct control of IBM when Aratek could not continue business as usual.

Aratek International Inc. 1988 - 1989

Senior Software Engineer

- Worked primarily on the above IBM project while it was being managed by Aratek, a software engineering firm.
- Was designated by the Director of Software Engineering to perform Platform Support as above for all of Aratek. This was in both the mainframe and micro areas, helping development staff with current implementation problems and working to prepare proposals for new projects.

Systemsmith Consultants 1985 - 1988

President

- Microsoft Windows training and programming for International Nickel Company (INCO).
- Traveled across the country to install, train and do support for the Canadian distributor of the STROBE Application Tuning Package. This is a profiling tool used to optimize applications running under MVS, with optional CICS, IMS and DB2 support.
- Supplied System Engineer (SE) support to customers on behalf of NAS for their IBM compatible mainframes.
- Served on the Board of Directors of the Central Ontario User's Group (COUG), a local organization specializing in large IBM (and compatible) mainframe systems.
- Designed and programmed (in IBM mainframe assembler language) an interactive system (ISPF panels) to simplify the migration of databases (and the programs that reference them) from development versions, to integrated test versions, to production. This included all compiles, Binds, Table Creates, etc. The program implemented a partial parser for the COBOL language, enough to find the database commands and modify the source to refer to the development / testing / production versions of the databases. The program took parameters that allowed it to work with any COBOL program and any database. The environment was DB2/CICS/IMS.
- Have owned a microcomputer since 1978, and have worked on a variety of advanced applications under MSDOS, UNIX, and other systems. Familiar with most major PC-based systems. Currently own an 80486-based professional development system. Projects include:
 - Writing various utilities and packages over the years, mostly in C, C++ and Assembler.

- Windows and OS/2 programming.
- Several advanced projects including the evaluation of multi-user Operating Systems for PCs.
- Extended and modified a standalone microcomputer (Z-80 based system) process control application to be able to use additional memory. This included designing and implementing a set of subroutines to access, allocate and control banked extended memory hardware.

Selected Clients

Arisia Microsystems, Burroughs Canada, CP Rail, ESSO Resources, Fabridyne Electronics Inc., Harlequin Books, IOF, Logitek International, Metropolitan Life, Metroland Publishing, NAS, A.C. Neilsen, Performance Systems Inc., Royal Bank of Canada, Royal Insurance, Toronto Star Newspaper, Torstar Corporation, W.G. Hutchison and Co. Ltd.

Workers' Compensation Board of Ontario 1978 - 1984

Software Planning Analyst 1980 - 1984

Software Planning

- Investigated and justified products, including NCCF, NPDA, STROBE, MSI, DF/EF, SMP/E, DFP/370, DF/DSS, INFO/SYSTEM, INFO/MANAGEMENT, ISPF, various SAS products, Tape Management Systems, Security Systems, and Electronic Mail
- Wrote informational reports for management, including MVS/SP, MSS, SNA
- Planned implementations, including Shared Spool, JES2 1.3.x, MSNF, and printer subsystems including Xerox 9700 and IBM 6670 with IDWS
- Performed ongoing research, keeping current in hardware and software technology

Management Level Functions

- Project management, in particular the installation of an IBM Mass Storage Subsystem (MSS)
- Chaired weekly problem review meetings
- Participated in monthly account meetings with IBM to ensure client satisfaction (MPLAN meetings)
- Software budgeting
- Planned for installation of MICS (an SMF database system), including specification of a new accounting system

Capacity Planning

- CSP (Complex Systems Planning) participation
- Various analyses of SMF, RMF, PA2, MSS, and 3705 data
- Determined MSS upgrade requirements
- Performed vendor evaluation, especially Amdahl vs. IBM

System Performance and Monitoring

- General system tuning using various tools
- Membership in the SHARE MVS Performance Project
- Quality Assurance (Software change forms)

Product implementation

- STROBE, OMEGAMON, INFO/SYSTEM and TSOMON
- TSO/APL, including internal consulting to the Actuarial Services department

Education, Training and Documentation

- Attended many courses and conferences, including SHARE, GUIDE, COUG, etc
- Presented seminars on new products to Operations, System Programmers, Application Programmers and Managers
- Software Consulting to Operations, System Programming, Applications, and End User staff
- Co-authorship of the in-house MVS User's Guide

Software Analyst 1978 - 1980

- Care and feeding of MVS, including writing and modifying system exits, JES2 maintenance, resolving system dumps, general fire-fighting, etc
- Product installation of many IBM and non-IBM Program Products

Canadian Tire Corporation, System Programmer 1976 - 1978

- VS1 and MVS Maintenance/Development
- VM/VS1 to MVS Conversion
- JES2 maintenance
- Installed software packages, including the first IPO, and the first release of TSO/VTAM.

I.P. Sharp Associates, System Programmer 1973 - 1976

- APL interpreter Maintenance/Development
- System Engineer support for customers with in-house APL

Consumer's Gas Limited, System Programmer 1972 - 1973

- MVT and HASP Maintenance/Development
- SMF exit writing and analyses

Education and Honors

- 1972 - Bachelor of Mathematics (B. Math), **University of Waterloo**, Waterloo, Ontario, Canada.
- 1968 - **William Lowell Putnam Mathematics Competition**. (Sponsored by the American Mathematical Association and open to all University undergraduates in North America). **Rank: 173rd in North America, written in my freshman year.**
- 1967 - Rene Descartes Mathematical Scholarship to University of Waterloo. Amount: **complete 4 year tuition.**
- 1967 - **Senior Mathematics Contest** (Sponsored by the University of Waterloo and open to students in Ontario in grades 12 and 13). **Rank: 22nd in Ontario.**
- 1965 - **Junior Mathematics Contest** (Sponsored by the University of Waterloo and open to students in Ontario in grades 9-11). **Rank: 8th in Ontario.**