

# LOREN MARK SWEARINGEN

Visual Basic Software Developer • Quantitative Investment Analyst



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## Skills

- Quantitative analysis of financial data
- Full software development life cycle
- Write user and developer documentation
- Training sessions for users and developers
- Analyse requirements
- Software and database design
- Coding and implementation
- Debugging and maintenance

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## Availability

Available now for  
a new contract or  
full-time position.

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## Education

**Washington University (John M. Olin School of Business)** **St. Louis, Missouri**  
Master of Business Administration (MBA) with concentration in Finance **May 1991**

**Washington University (School of Engineering and Applied Science)** **St. Louis, Missouri**  
Bachelor of Science in Computer Science (BSCS) **May 1989**  
Bachelor of Science in Electrical Engineering (BSEE) **May 1989**

**SAT (Scholastic Aptitude Test) Mathematics score: 800/800** (highest possible in the U.S.)

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## Professional Certification

**National Futures Association Series 3** **December 1994**  
National Commodity Futures Examination (U.S.)

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## Technology Experience

<b>Software development</b>	<i>Experience</i>
<b>All VB/VBA</b>	<b>7 years</b>
Visual Basic 6	3 years
Visual Basic 5	2 years
Excel VBA	5 years
Access VBA	3 years
Word VBA	2 years
<b>COM/ ActiveX</b>	<b>4 years</b>
Unix C	2 years

<b>Operating systems</b>	<i>Experience</i>
Windows NT 4.0/2000/XP	6 years
Windows 95 / 98	3 years
Windows 3.1 / 3.11	3 years
Unix	2 years

<b>Database programming</b>	<i>Experience</i>
<b>All SQL programming</b>	<b>6 years</b>
Oracle (incl. PL/SQL)	2 years
MS Access	3 years
SQL Server	9 months
Sybase	9 months

<b>Database access methods</b>	<i>Experience</i>
<b>All database access methods</b>	<b>6 years</b>
ADO (ActiveX Data Objects)	2 years
DAO (Data Access Objects)	4 years
Microsoft Jet	3 years
ODBC	3 years

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## Employment History

*Traveling, volunteer work, software projects*      **July 2003 - Present**  
**MLC Limited** (North Sydney, Australia)      **July 2002 - July 2003**  
**J.P. Morgan Chase & Co.** (Sydney)      **Feb 2001 - May 2002**  
**Macquarie Bank Limited** (Sydney)      **April 2000 - Jan 2001**  
**Roche Bioscience** (Palo Alto, California)      **March - Nov 1999**  
**CPA Advisory Services** (*via Internet*)      **Nov 1998 - Feb 1999**  
**Impact Systems, Inc.** (Los Gatos, Calif.)      **Aug 1997 - Aug 1998**  
**Teleos Asset Management** (New York)      **Nov 1993 - Dec 1996**  
**Watterson College** (St. Louis, Missouri)      **Jan 1992 - June 1993**  
**Southwestern Bell Telephone** (St. Louis)      **June - Oct 1989**  
**IBM** (Rochester, Minnesota)      **June - Dec 1988**  
**Washington Univ. Mech. Eng.** (St. Louis)      **1985 - 1988**

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## Industry Experience

Six years experience in financial markets and investments:

- 3 years experience in U.S. hedge fund
  - 3 years in Australian financial services
  - Familiar with funds management, futures trading, equities, fixed income, foreign exchange, superannuation, insurance and financial accounting
- Three semesters teaching tertiary-level (college) courses
- One year in real-time control systems
- Eight months in pharmaceutical research

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## Work Experience

**Analyst / Programmer**  
**MLC Limited**

**July 2002 - July 2003**  
**North Sydney, Australia**

*Contract agency: Quasar Professionals*

**Company/job description:** MLC offers insurance and investment products through its affiliated financial advisers to retail clients throughout Australia. It was purchased in June 2000 by National Australia Bank, the largest bank in Australia. I worked as a software developer for the *Adviser Tools & Services* team, which is part of the *Wealth Management Technology* division. This team produces and maintains the software and technology services that support the company's network of financial advisers. During my contract at MLC, I worked on four major projects for two different managers within the ATS team. All of these projects involved the development of Visual Basic 6 desktop applications interfacing with a Microsoft Access database using DAO. The four projects were as follows:

- Conversion of an existing retirement planning application from Delphi to Visual Basic. Responsible for analysis, re-design (of the database, user interface and program logic), coding and testing. Produced a 106-page document demonstrating the correct implementation of various financial and mathematical formulas in the new application.
- Complete re-write of an existing Visual Basic program for simulating a client's capital accumulation based on savings patterns and portfolio selection. This application is partly a marketing tool, partly a simulation model. It uses a statistical modeling library (produced by another MLC division) to perform a Monte Carlo simulation of possible investment outcomes. As the technical lead for a team of four developers that worked on the project, I was responsible for the complete re-design of the program logic and the two databases used by the application. I also wrote two small utility programs used for supporting the product.
- Conversion and enhancement of another existing application from Delphi to Visual Basic, this one to provide analysis of insurance needs for individuals and businesses.

On this project I worked on a team of four developers and provided substantial input into the design of Visual Basic classes, data structures and additions to the user interface.

- Major enhancement to the investment simulation program I had worked on previously. I was the technical lead for a team of three developers working on this project and was responsible for designing and coding enhancements to class modules and database tables. I also made enhancements to the programming interface for the Monte Carlo simulation module (implemented as an ActiveX DLL) and wrote a 68-page developer guide for the statistical modeling library.

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**Analyst / Programmer**  
**J.P. Morgan Chase & Co.**  
*Contract agency: Greythorn*

**February 2001 - May 2002**  
**Sydney, Australia**

**Company/job description:** J.P. Morgan Chase is an international investment bank formed by the merger in January 2001 of JP Morgan and Chase Manhattan Bank. I worked as an I.T. contractor in the *Investor Services* division (now part of J.P. Morgan Worldwide Securities Services) to develop new applications and enhance existing applications used by the bank for fund accounting, securities pricing and other investment management functions. The primary tools used were Visual Basic 6, ADO and Oracle PL/SQL stored procedures. During the course of my contract at JP Morgan Chase, I worked on several projects:

- Enhanced an existing application, consisting of several VB programs and Oracle stored procedures, to track and classify investment assets and automate the reconciliation of these holdings across different accounting systems within the bank
- Wrote several VB programs for a new application to receive price data from an external vendor and integrate this data into the bank's existing asset databases
- Designed and implemented a system to provide greater automation for the auditing of daily securities prices; this system consists of an Oracle database, stored procedures and several VB programs
- Participated in a major effort to integrate the securities pricing, fund accounting and portfolio analysis functions of Chase Manhattan Bank and BT Funds Management, following the acquisition of the BTFM back office business by Chase; wrote a 45-page system design document as part of this effort

In each of these projects, I interacted directly with end users to gather requirements; had extensive input into the analysis and design of databases and application programs; wrote or modified hundreds of lines of VB code and Oracle stored procedures; and wrote or revised applicable documentation.

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**Analyst / Programmer**  
**Macquarie Bank Limited**  
*Contract agency: I.T. Resources*

**April 2000 - January 2001**  
**Sydney, Australia**

**Company/job description:** Macquarie Bank is an Australian investment bank. I was contracted by the *ISD Equities* division to develop, enhance, support and maintain various software tools and custom applications used by the *Equities Research* department (now part of Macquarie Securities). These software tools and applications are used to create and publish financial research for the clients of Macquarie Bank. My work was done in Visual Basic 6 (using ADO, DAO and ODBC to connect to several Sybase and SQL Server databases), Excel VBA, Word VBA and Office 2000 running under Windows NT. Projects and tasks I performed included:

- Worked with another analyst/programmer to create an Office 2000 COM add-in to implement custom functionality in Word 2000 and Excel 2000, and wrote registry files and a batch file to install the custom application
- Interfaced directly with company analysts and desktop publishers to determine requirements, specifications and layout for Word templates and Excel charts
- Coordinated user acceptance testing of the custom application
- Wrote and documented a database conversion program as part of a database migration project
- Created a generalized model conversion tool to automate the modification of Excel spreadsheets in analysts' company models
- Updated automation code and database queries in an earnings report spreadsheet and a market share ranking spreadsheet
- Various other ad-hoc software support tasks

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**Software Developer**  
**Roche Bioscience**  
*Contract agency: CastleRock Technologies, Inc.*

**March - November 1999**  
**Palo Alto, California**

**Company/industry description:** Roche Bioscience is a pharmaceutical company that develops and markets consumer prescription drugs, including the successful and well-known products Aleve, Xenical and Tamiflu. Research at the Palo Alto site is organized into two business units, the *Inflammatory Diseases Unit (IDU)* and the *Neurobiology Unit (NBU)*.

The "drug discovery" process utilizes various technologies to identify chemical compounds with favorable characteristics. One of these technologies is called "high throughput screening," in which electro-mechanical robots are used to test hundreds or thousands of chemical compounds in a short period of time. The *Discovery Systems*

department (now called *Global Research Informatics*) provides software support to the biologists and chemists who perform this drug discovery research.

**Job description:** I was hired as a contract programmer in the *Discovery Systems* department to assist in a major “Y2k” software migration effort, from a non-Y2k-compliant data storage and analysis system to a Y2k-compliant system. The new system uses ActivityBase software, which runs on an Oracle server, and includes a set of Windows client applications. XLfit, a non-linear curve-fitting add-in for Microsoft Excel, provides most of the statistical tools for data analysis in this system.

This migration effort involved a number of tasks:

- Worked directly with researchers to determine the requirements and specifications for their data analysis systems
- Worked directly with statisticians in the biomathematics department to develop and validate mathematical models for analysis of experimental data
- Designed and created Microsoft Excel spreadsheets to implement mathematical data analysis models and to provide an attractive and functional user interface for the biologists and chemists who use them to analyze the results of their research
- Designed and coded a program in Visual Basic 5 to query the Oracle database, increasing its functionality, improving the user interface, and speeding performance by up to eleven times over the previous version of the program
- Designed and coded a customized application in Microsoft Excel VBA, which provides tools to assist other developers at Roche in the creation of new data analysis systems
- Prepared and taught a training session for other software developers and statisticians at Roche in the use of the software tools I created in order to improve the productivity of future development of data analysis systems

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**Independent Consultant** (*self-employed*)  
**CPA Advisory Services** (*client*)

**November 1998 - February 1999**  
(*via Internet*) **Omaha, Nebraska**

**Client description:** CPA Advisory Services provides various services and support to Certified Public Accountants nationwide, to assist them in offering investment advice to their own clients.

**Job description:** I was retained as an independent consultant to develop a custom software application that allows an individual to answer a series of questions regarding finances and investing, and then produces a recommended asset allocation to meet their investment goals. The program was implemented using Microsoft Excel VBA and Microsoft Word VBA, and was marketed to CPA’s for use with their clients. It can be customized for different financial questions, different asset allocations and different recommended investments.

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**Software Developer**  
**Impact Systems, Inc.**

**August 1997 – August 1998**  
**Los Gatos, California**

*Contract agency: Heuristics Search, Inc.*

***Company/industry description:*** Impact Systems, Inc. (now Voith Paper Automation) manufactures electronic sensors and real-time control systems for paper mills worldwide. This equipment is used to measure and regulate various characteristics of the paper as it is being produced, such as weight, moisture and thickness.

***Job description:*** I was hired as a contract programmer to create a software package that would store selected measurements from the electronic sensing equipment for both real-time and historical data analysis. In order to achieve this objective, I performed the following tasks:

- Worked directly with the Vice-President of Engineering to determine the requirements and specifications for a family of real-time data storage, retrieval and analysis applications
- Designed a data object hierarchy to organize real-time electronic sensor data
- Designed and created a Microsoft Access database for storage and retrieval of real-time sensor data
- Designed and coded an ActiveX DLL in Visual Basic 5, which served as a COM interface between application programs and the Access database
- Provided technical leadership for five other programmers developing applications using the ActiveX server I wrote
- Traveled to domestic and international customer sites to install, configure and customize these applications

Impact Systems was acquired by Voith Sulzer in 1999 to form Voith Paper Automation. The applications I worked on are marketed under the name InfoPac.

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**Quantitative Research Analyst**  
**Teleos Asset Management**

**November 1993 – December 1996**  
**New York City / Greenwich, Connecticut**

***Company/industry description:*** Teleos Asset Management is a private investment partnership which manages a “hedge fund” that is marketed to high-net-worth individuals in the United States and to foreign investors. A hedge fund is an actively managed, non-traditional investment vehicle which trades in stocks, bonds, futures and foreign exchange instruments.

Teleos is a “global macro” hedge fund, which means that its trading decisions are guided by an analysis and understanding of macro-economic conditions (such as inflation, unemployment and government debt) in the countries in which it invests. Teleos focuses its attention primarily on the major developed economies in the world: the U.S. and

Canada; the U.K., Germany, France and other Western European countries; Japan, Australia and New Zealand. The financial instruments most commonly used for this activity are stock index futures, bond index futures, and forward currency contracts. Individual trading positions may last for hours, days or months. Worldwide financial markets are constantly monitored through a computerized network of trading screens which provide real-time quotes and news.

**Job description:** When I began work at Teleos, I was the fourth person to join the company and was recruited by the president and founder, who holds a Ph.D. in economics from the University of Chicago. I was hired primarily to develop computerized models for trading financial markets, and also to provide system administration and software support for the company's PC network. Because Teleos is a small firm, my job involved a wide variety of tasks:

- Developed computerized models using Microsoft Excel VBA, Microsoft Access VBA, Unix C, RATS (Regression and Time-Series) statistical analysis software, and the XMIM query language (a proprietary database language for market analysis) to test trading strategies on historical price data and economic indicators
- Developed a customized portfolio management application in Microsoft Excel VBA to track and produce a daily report of all trades and open positions
- Developed enhancements to the daily risk management report in order to ensure compliance with contractual restrictions on trading exposure
- Managed ten PC's and one Sun Sparc 10 in a heterogeneous network environment that included Windows NT 3.51 Server and Workstation, Windows 95, Windows 3.1 and 3.11, DOS and Novell NetWare 3.11
- Migrated the network from NetWare 3.11 to Windows NT Server 3.51
- Monitored the fund's cash account and invested free cash balances in Treasury bills and in an institutional money market fund

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**Instructor**

**January 1992 - June 1993**

**Watterson College**

**St. Louis, Missouri**

Watterson College is a private, two-year vocational/technical school that offers courses in business, computers, word processing, and other subjects. As a full-time instructor I did the following:

- Taught classes in computer software and economics; wrote all syllabi, lectures, homework, and tests
- Started and maintained a library of software, documentation, and course materials for other instructors
- Was appointed as a representative to the curriculum committee for revision of the computer curriculum

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**Software Developer**  
**Southwestern Bell Telephone**

**June - October 1989**  
**St. Louis, Missouri**

Co-authored a Unix C toolkit of user interface routines to provide menu and window capabilities on standard text terminals, for use by other software developers at Southwestern Bell. *(This position was full-time during the summer and continued part-time during the first year of my MBA program.)*

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**Software Developer**  
**International Business Machines, Inc.**

**June - December 1988**  
**Rochester, Minnesota**

Developed enhancements to the word processing software included in the operating system for the IBM AS/400. *(This was a full-time "co-op," or co-operative education position, during the fall semester of my senior year at Washington University.)*

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**VAX/VMS System Manager**  
**Washington University Mechanical Engineering Dept.**

**Fall 1985 - Spring 1988**  
**St. Louis, Missouri**

Managed the daily operations of a departmental DEC VAX-11/750 running the VMS operating system. Established and maintained user accounts. Established and performed a regular schedule of nightly and weekly backups. Offered general assistance to users. Trained two system operators. *(This was a part-time position while I was an undergraduate university student in the School of Engineering.)*

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