VINCENT LAW

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OBJECTIVE:
A Software Designer/Software Developer/Software Engineer position in the field of computer security applications and operating systems security.

CAREER ACCOMPLISHMENTS:

- Wrote image analysis modules on SGI to counter-prove life existence in Mars
- Designed Microsoft Visual Basic code templates and database tables to automate daily security transaction reports for both internal and external clients
- Developed source codes in DHTML, DCOM, JavaScript, and VBScript to add analyst score pages into a security portfolio website to help corporate clients reference portfolio updates and stock analysis
- Wrote Windows-based front-end utility program allowing client companies to populate marketing analysis data and generate demographic matching scores upon a website visit by a customer
- Used Microsoft Visual C++ to develop COM wrapper object for Windows-based user interface so that it can communicate and exchange data with the CORBA object in the UNIX-based backend server
- Designed and developed about 40 percent of the entire C/C++ source codes and templates, including file compression tools and user interface libraries, for several low-end titling programs to help the company maintain market leadership
- Wrote a tool to use a symmetric security key is based on the serial number of the removable medium to encrypt copyright information in each software installation to prevent from duplication in multiple computers

SUMMARY OF QUALIFICATIONS:

- 12 years of work experience in team-working environments
- Master of Science in Computer Science

- Concepts in computer security fundamentals, such as IPSec, intrusion detection systems, vulnerability analysis, RSA, Diffie-Hellman
- Knowledge in operating systems, like socket programming, semaphore and thread programming, concurrency control
- Experience in various programming languages like C/C++, Visual Basic, HTML, JavaScript, VBScript, SQL, Java, Perl
- Extensive exposure to software development tools such as Visual Studio, emacs, Embarcadero Rapid SQL, ActiveX/COM/ADO, SDKs
- Ability to analyze and solve problems
- Willingness and adaptability in exploring and learning new technologies and new skills
- Maintenance of good relations with mentors, colleagues and ex-colleagues

PROFESSIONAL EXPERIENCES:

6/2002 - present **Student Intern, [NASA Ames Research Center](), Moffett Field, CA**

Achievements: generated programs on time and in budget to help analyze Mars landscape images

- Using C/C++, Interactive Data Language, and UNIX Shell scripts to write wrapper programs with customized inputs to help a geology scientist analyze landscape images taken from Mars Pathfinder.

6/2000 - 4/2002 **Programmer/Analyst, [Dresdner RCM Global Investors, LLC](), San Francisco, CA**

Achievements: added important features to one of the mostly-used websites to enable the company to generate more revenue and programmed internal report templates

- Created tables, stored procedures using SQL on Embarcadero Rapid SQL client program, and wrote executables using Visual Basic, to design a back-end database environment for an internal team, so that the team can use the environment to schedule the executions of all data extract programs and the emailings of the results to various recipients.
- Created independent data extract applications, using SQL on Embarcadero Rapid SQL client program, Visual Basic, and proprietary ActiveX objects for Ipswitch's WS_FTP program and Network Associates' PGP tool respectively, to query periodic data on security transactions and/or holdings and to automatically forward the data to different internal or external clients based on each client's requirements.

- Used ADO, JavaScript, VBScript, SQL Server, Sybase, ActiveX, Visual Basic and third-party objects to create and enhance new web pages, and create and update stored procedures and tables in SQL Server or Sybase database servers, for use by internal financial/business analysts.

7/1998 - 6/2000 **Software Developer, Cogit.com, San Francisco, CA**

Achievements: provided COM programming help in a highly-regarded project and wrote program to populate backend data

- Utilized Microsoft's ActiveX Data Object technology with the use of Visual Basic and T-SQL to build and maintain a utility program, which was hosted inside a Citrix application server, for clients to customize score management options for their better eCommerce and eMarketing purposes.
- Worked on the data transformation projects, including SQL code writings for both SQL Server and back-end Oracle Server as well as VBScripts developments for the daily transformations of the data from the involved tables in the SQL Server, which served as the front-end data server for the clients, to the corresponding tables in the Oracle Server, which served as the actual back-end data store.
- Took part in development project discussions, wrote and maintained Visual Basic source codes for the program TargetMaster Workbench, which was an internal marketing data analysis tool for sales analyses and marketing matches based on various combinations of demographic segments, weights and treatments.
- Used Visual C++, Visual Basic and COM Object to build a wrapper object as a channel between the internal matrix data model objects in the UNIX-based server and the front-end Windows GUI including the methods which loads and saves the objects into an OLE-storage file.

6/1991 - 12/1998 **Software Engineer, InnoVision Technology, Hayward, CA**

Achievements: wrote about 40% of codes for all involved products to help the company maintain the market-leader position in low-end titling software market

- Wrote TARGA image file I/O routines for use in the customized GUI library.
- Used Lattice C and MC68000 Assembly Language in Amiga platform to design a fast compression routine for loading and saving an IFF graphics file format which is the mostly used format in Amiga and includes information like total compressed data size, resolution used, total palette planes used and the color mapping data, etc.
- Built a customized Windows user interface library which includes features enabling the super-user/administrator to customize the 9x-alike appearances of the graphical user interface in Windows 3.x.

- Wrote codes to utilize Microsoft's Unicode technology in order to support the use of certain Asian languages, which require multibyte strings.
- Developed a titling software spell-checker interface using Visual C++
- Applied and developed interface classes (including panel windows and panel button controls) with the Microsoft Windows COM Object technology using Microsoft Visual C++.

1/1989 - 9/1989 **Co-op Software Engineer, <u>Wang Laboratories</u>, Lowell, MA**

Achievements: helped develop an important utility program in the print server integration project

- Wrote a C routine under the Wang VS minicomputer platform to import any name of personal computer LAN emulation type (e.g. AppleTalk, NETBIOS) during remote login, and to verify the list of emulation names from the data file, so that VS could begin a remote dialup routine to the LAN or return a failure message to the VS.

EDUCATION:

M.S., Computer Science
September 2000 to June 2003
<u>University of California, Davis</u>

- Thesis title: **Vulnerability Database Integration to Intrusion Detection Systems** (Thesis advisor: Dr. Matt Bishop)
- Notable courses include
  - *Computer Security: Intrusion Detection Based Approach* (Project paper: **Vulnerability Taxonomy Automation in Intrusion Detection Systems**)
  - *Cryptography and Data Security* (Sample program: **Securing UDP message exchanges using HMAC-MD5**)
  - *Vulnerabilities Analysis and Policy* (Project paper: **<u>Vulnerabilities in Firewalls</u>**)
  - *Cryptography for E-Commerce* (Project paper: **Steganography Security**: **<u>Word document</u>, <u>PowerPoint</u>**)
  - *Operating System Models* (Sample program: **Distributed System using Optimistic Concurrency Control and Two-Phase Commit models**)
  - *Internet Quality of Service* (Project paper: **Security for Internet QoS -- a survey: <u>PDF</u>, <u>PowerPoint</u>**), and
  - *Optical Communication Networks*

B.S., Systems Engineering, with Magna Cum Laude
September 1986 to May 1990
Boston University, G.P.A. 3.50

January 1991 to May 1991
San Jose State University.

COMPUTER SKILLS:

- ***Language*** C/C++ (gcc/g++, Visual C++, Borland C++, Symantec C++, Lattice C), Visual Basic, Java, JavaScript, VBScript, HTML, SQL, UNIX Shell, LISP, Prolog, XML, MC68000 Assembly, Postscript, COBOL, Pascal, BASIC, Ada, Interactive Data Language
- ***Operating Systems*** UNIX/Linux, Windows (Windows 9x, Windows NT, Windows 3.x), MacOS, X Windows, DOS, AmigaDOS, Wang VS
- ***Hardware Platform*** PC Compatible, Macintosh, PowerPC, Sun Workstation, Silicon Graphics Onyx, Amiga, Wang VS minicomputer
- ***Software***
  - *Software Development Tools:* Microsoft Visual Studio, Microsoft Developer's Network, Microsoft Visual SourceSafe, gcc/g++, Forte for Java, CVS, COM/OLE Object Viewer, SQL Server, Oracle8 Editor, Sybase Open Client, Embarcadero Rapid SQL, Tempest Messenger System SDK, HTML Editor, CLisp, gProlog
  - *Networking Utilities/Applications:* Netscape Navigator, Internet Explorer, Norton Anti-Virus, McAfee VirusScan, Network Associates PGP client, NEC e-Border client, WS_FTP Pro, Reflection FTP client, Windows NetMeeting, SecureCRT, Prodigy, America Online, CompuServe, NCSA Telnet, COMit, ProCOMM
  - *Graphics and Video Editing Tools:* Adobe Photoshop, Adobe Illustrator, Ghostscript/Ghostview, NASA Ames Viz, Video Toaster, Deluxe Paint
  - *General:* Microsoft Office (including Outlook, Word, Excel, PowerPoint), GNU cygwin, Windows Task Scheduler, Adobe Acrobat, WordPerfect

LANGUAGE SKILLS: Fluent in English and Cantonese, understand some Mandarin, and begin novice French.

REFERENCES: Furnished upon request.