Kenneth H. Isaak
Embedded Software Engineer
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Quality and team driven software and project professional with over 22 years experience in delivering product that meets design and performance specifications on time and on budget. Skilled in writing code daily in a development environment using common software tool chains to provide product against multiple delivery targets. Project management experience includes writing project documents and management of outsourced staff in India. Proven track record of leadership providing a customer driven focus to exceed corporate goals.

PROFESSIONAL EXPERIENCE

Embedded Software Engineer; Vermeer Manufacturing Company; Pella, IA   July 11, 2011–August 21, 2014

- 68HC12 microcontrollers, PowerPC controllers.
- CAN bus, SAE J1939, ISO11783
- VT-Designer
- Bare Metal Applications.
- IsoBus virtual terminals
- VxWorks embedded real time operating system and applications.
- Agricultural equipment: Balers, Horizontal grinders.

Senior Software Engineer; MSC.Software Corporation; Santa Ana, CA   May, 1996–October 16, 2009

- Over 13 years of **direct daily practice writing C and C++ software** with the development and maintenance of **MSC Patran,** a CAE finite element analysis modeling application.
- Participated in a team environment that ranged in size from 6 to 60 developers.
- Provided direct managerial direction over an employee. Managerial tasks included performance reviews of this direct report.
- Exceeded customer expectations by decoupling the release schedule of geometry translation utilities from the release schedule of the product. Resolved a common customer request by allowing customers to tightly integrate the product into their process.
- Integrated a materials database with a Qt user interface into MSC Patran.
- Protected approximately $1 million per year generated by the client contract while meeting deadlines for my existing work schedule.
- Wrote, maintained and expanded script driven automated **quality assurance** development and software tests to improve the quality of the code base.
- Leveraged and expanded corporate products by managing **partner relationships** with third party code venders and client contracts.
- Built and tested release media for product releases against multiple release platforms: Windows, Linux, AIX, HP700, and SUNS.
- Maintaining and improving the customization product that described the externally accessible API for MSC Patran improving product integration with customer manufacturing processes.
- Managed **outsourced staff** in India.
- 4 years experience with the development and maintenance of **CFX-Build**. Collected requirements, negotiated project details, wrote process documents, implementing the software, wrote documentation, tested, and creating delivery media on **Windows, Linux, SUNS, and various UNIX (HP, SGI, AIX)** platforms.
- 6 years experience providing management duties for software tools used to translate between different CAD geometry files. Interfaced with personnel in **India** used to implement the project.
- Enabled the rapid development of applications in MSC Patran by developing and maintain an **XML** interface that externally defined user interfaces.
- 4 years experience as an MSC Patran **Project Manager**.

- Used the following tools: UNIX: IBM, SUNS, HP, SGI; **Windows NT; Windows XP; Linux**; make; apache; IIS; **C; C++; FORTRAN**; Bourne shell; C shell; Korn shell; PCL; Word for Windows; Adobe Framemaker; **IBM Rational Clearcase**; Microsoft Project; Install Shield; TCP/IP networks; SCons, Perl; Python; Vmware; Visual SlickEdit; Dtsearch; Spatial Interop, **XML, graphical programming**

Software Engineer; Physicist; Tamarack Scientific Co.; Corona, CA   May, 1988 – May, 1996

- Designed, wrote, and implemented **machine control software** for custom laser ablation and photo exposure manufacturing tools.
- 6 years of **daily** experience writing **machine control software** components using the **C** programming language.
- Designed and implemented high reliability and fault tolerant **object** oriented **client server** software.
- Designed, developed, and implemented the mechanical, electrical and control software for an experimental rapid thermal processor used for processing silicon wafers for integrated circuit manufacturing.
- Designed, developed, and implemented the control software for a collimated ultraviolet photo lithography tool for a high volume, large format, flexible circuit production environment.
- Designed, developed, and implemented user interface client code in HPVee on an HP700 Unix workstation for a laser ablation tool used in the production of HP ink jet printer cartridges.
- Designed, developed, and implemented control software in **C** for a laser ablation tool used in a step and repeat process to manufacture IBM main frame components.
- Proficient at reading and writing electrical schematics using component data sheets.
- Proficient and fully trained in electronic assembly.
- Experienced in using volt/ohm/amp meters, oscilloscopes and other test and calibration equipment.
- Created drawings for and implemented the electrical wiring for a prototype silicon wafer processor.
- Created drawings for mechanical components and assembled a prototype silicon wafer processor.
- Co-authored a **patent** (us 5131752) for a process control system using an optical measurement device to control the thickness of thin films on silicon wafers. As an intern at Hughes Aircraft I participated in the manufacture of copper thick film hybrid components for short wavelength phased array radar systems.
- Used the following tools: Access; Bourne shell; C shell; **C; C++;** Excel; HP VEE, now Aligent VEE, a LabVIEW like tool; HP-UX; Korn shell; OS/2; PVCS; Phar Lap protected mode DOS; TCP/IP networks; Visual Basic; Windows 3.11; Word for Windows; make; ladder logic; PLC

Career Notes:

- **Optivus Proton Therapy**; San Bernardino, CA; February 22, 2011 to March 25, 2011; Wrote **Qt** 4.6, **Linux**, **Git**, **C++, UML**, **Visual Paradigm** user interface software to implement calibration procedures for a proton beam linear accelerator used to treat cancer patients.
- **Nouvation Inc.**; Fountain Valley, CA; May 2010 to September 2010; Wrote Visual Basic 6 application to implement a laboratory reporting tool using in hospital and military field settings.
- Home network is comprised of several different machines. Both Windows and Linux are used to provide a productive home environment used to expand my skill set. This network incorporates file sharing (Samba), scanners (Sane), printers (CUPS) and other peripherals.
- Compiled **Linux kernels** and experimented with modified kernels implemented with the addition of **patches** downloaded from the internet. Built a system from scratch using LFS or Linux from Scratch. Experience with RedHat, Ubuntu, LFS, CentOS.
- **QT 4.7** is installed on my home Ubuntu machine, allowing me to experiment with technologies such as **QML**.
- United States Citizen.
- Willing to relocate.

EDUCATION

Bachelor of Science in Physics; South Dakota School of Mines and Technology

Associate of Arts in Electronics; Orange Coast College