P/K Solutions, Inc.

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PROFESSIONAL SUMMARY

30+ years in Information Technology/Software Development with experience in Agile, O-O techniques, analysis and design, multitier applications and database programming. Primary expertise in C#/Windows/UNIX/C++/ SQL Server (2008+)/Firebird and development with additional experience in Delphi/Visual Basic/Visual C++/MS-Access/SQL Server. Current software development extensively uses OOA/OOD techniques where applicable and is primarily written in C#, C++, Delphi, or C. Industry expertise in laboratory, insurance auditing, real estate, financial services, education, embedded systems, system administration and digital video.

TECHNICAL SKILLS

Languages: C, Unix C++, Visual C++, VB.NET, .NET core under both Windows and Linux, golang, VB6, VBScript, Java, JavaScript, ES6, Aurelia, Typescript, KnockoutJS, jQuery, COBOL 74 & 85, FORTRAN, Assembler, Delphi, Perl5, Oracle Reports, FORTH, SQL, Unix Shell, XML, Objective C (under OS/X 10.5, 10.6, iOS 4 and 5), Python, Typescript, XPath

Web Technology: Azure**,** Angular 2-7**,** ASP.NETForms & MVC, ASP.NET core 2, ASP scripting, Aurelia, ElectronJS Knockout/JS, Rivets/JS, Unix CGI Scripting, JavaScript (ES6 and Typescript), HTML, PHP5, PHP7, JSON.NET, iMacros, Selenium, WordPress.

Multimedia: openCV, DirectX9 - 11, libffmpeg

Databases: MS SQL Server 2008-2017, MS-Access, Firebird, SQLite, MySQL, Postgresql

Applications: MS-Excel, MS-Word, MS-Access, Office365, LibreOffice

Operating Systems: UNIX/AIX, Linux desktop and embedded, Windows XP - 10, Android KitKat-Current, iOS 4 - current, OS/X 10.3 - Current

EDUCATION

B.S. Computer Science   Park College, 1986
B.S. Management/Computer Information Systems   Park College, 1990
Graduate coursework in Computer Science at the Univ. of Colorado, Boulder

PROFESSIONAL MEMBERSHIPS

Member of the IEEE Computer Society since 1987

PROFESSIONAL EXPERIENCE

1994 - Present   **Owner/Principal P/K Solutions, Inc.**

Cargill, Inc. (2019 – Present)
- C# development of Azure Application Services utilizing Storage Services, Azure Functions, Web Jobs, Key Vaults, Event Hubs, Data Factories integrated with SSIS.
- Creation/Configuration of various Azure services (Storage, App Services, Key Vaults, Event Hubs, etc)_
- Development of Azure SQL Graph database with needed Stored Procedures and Functions.
- C# development of Web API to access SQL Graph database
- Development of various Bash scripts in WSL for data QA

Dodson Solutions Group (2017 – Present)
- Developed Digital Signage product using Raspberry Pi, ElectronJS, golang, PHP, typescript and Angular 7. Administrative interface runs on OSX, Windows and Ubuntu Linux.
- Linux System Administration, Setup, and Support utilizing heavy automation via ISPConfig and Rundeck
- PHP programming customizing ISPConfig for system admin tasks
- PHP programming customizing websites, including Wordpress themes
- PHP programming customizing the Horde Groupware 5 suite
- .NET core (ASPNET Core) programming for Dodson Solutions Group main website
- Typescript/ES6 programming
- PCI integrations with BluePay for custom shopping carts

Midland Loan Services (2017 – 12/2018) [Federal security clearance]
- Maintenance of existing legacy websites (VB.NET) and some DB maintenance (SQL Server)
- Maintenance of enterprise back-office systems
- Security enhancement and remediation
- SQL Server database enhancements
- Typescript enhancements to Enterprise! system

Upper Lakes Processing Systems(2018)
- New development on call-center website and server using Aurelia, ES6 and C#

Jansen Advertising (2016 – 2017):
- Backroom operations automation including integration with quickbooks online
- Maintenance of vendor reports
- Maintenance of various Excel spreadsheets used by the salesforce and feeding into the backroom operations

NewAngle Technologies (2008 – Present):

- Design and development of several back-end data-repository websites for mobile applications developed with New Angle
(Examples: Graphics/Engineering document repository, Medical benefit plan repository) [C#, ASP.NET 3.5]
- Project specification and planning/estimates for clients involved in projects with New Angle
- Server hosting specification, configuration and management until project turnover to client.

Ken-A-Vision (2008-Present)
Projects:

- Devised keygen scheme in embedded C for Educam Plus v2 server to provide licensed access to the software in the absence of a Ken-A-Vision video product. Also wrote infrastructure code to create license keys as an office desktop application using C# and Win32 interop.
- Developer of Educam Plus v2 (UI and Server, multiplatform and multimedia) using embedded C, HTML5, rivetsjs, civetweb and ElectronJS [2017 - Present]
- Developed embedded versions of Educam Plus v2 for use in converting legacy USB video devices to wireless video systems.
- Developer of chromebook vision application (Chromecam) [2015-present]
- Website maintenance and enhancement in WordPress [2015 – present]
- Developed automation tools for the subsidiary KAVService.com including html scraping using the Selenium.NET api [2016-present]
- Developed email traffic monitoring reports in powershell and Office365.com [2016]
- Lead developer of new products including architecture and design of the Educam product. [C#/Objective-C/Windows/iOS/OSX] [2015]
- Supervised other contractors on development of software [2015 – present]
- Designed and implemented the firmware communication protocol for an embedded camera control board (button panel) utilizing USB HID technology that was requested by a multinational equipment integrator. [Embedded assembler for PIC] [2014]
- International support of the Ken-A-Vision software products involving translation of the AV4 product into new languages and assisting clients worldwide with installation and planning of multi-classroom deployments. [Java/C#] [2012 – present]
- International support of the Ken-A-Vision sales staff.
- Development of factory QA testing software for visual field of camera devices [C#] [2013]
- Development of embedded video systems providing camera control and video conversion on Beagleboard-xM platforms and the Raspberry Pi under a custom AngstromLinux build. This also involved accessing the video extension units through the uvcvideo driver utilizing C and adapting vendor-supplied code to the 3.2 Linux kernel. [C/C++/Embedded Linux] [2014 – present]
- Requirements development and evaluation of several embeddable single-board computer systems
- Development of video convertor software based on linux, running on the beagleboard [C/C++/Embedded Linux]
- Development of networking software for iOS 4 & 5 in support of Educam application in Objective-C [2015 – present]
- Enhancement of networking routines for Adobe AIR in support of Educam under Android [Java] [2015 – present]
- Contract development and support. Responsibilities included design and implementation of a camera/capture/vision SDK in C++, enhancement and maintenance of legacy applications in C# to support Vista and refit with the camera SDK. [ongoing]
- Sole responsibility for enhancement and further development of the Applied Vision 4 system from mid-2009 onward.
- (Planning and management) Worked with internal IT management and external vendors in determining and specifying requirements for several R & D prototype product implementations.
- Design and implementation of networked classroom application used in conjuction with Applied Vision 4.
- Coaching/project mentoring of client development staff towards initial release of Applied Vision 4.

- Filled role of IT Manager during employee absence / attrition.

For Rare Coin Dealers/Auction House (2005- Present):
Projects:
- Design and re-development of dealer (rare coin) inventory tracking system in Delphi 2006 (multiple dealers, nationwide)
- Project management of inventory integrations and transitions
- Website support and integration with the inventory tracking system for several dealers [C#, ASP.NET – various versions] some utilizing KnockoutJS, most utilizing jQuery.
- Development of plugins for web upload in C# for the inventory tracking system above [C#]
- Development of Ebay-upload plugin for inventory tracking system above [C#]
- Maintenance, support and enhancement of a dealer-oriented inventory tracking system (VB6).
- Web application maintenance using ASP.NET, C# and VB.NET [ASP.NET Forms]
- Newsletter distribution and subscription processing applications and services in Delphi 7 and Delphi 2006
- Conversion of legacy applications to VB.NET and SQL-Server 2000.
- Conversion of legacy applications to C# and SQL-Server 2008R2.
- Design and development of a new coin inventory tracking system and reporting in Delphi 2006 to replace an older system in VB6 (above) adding extra capabilities and bringing the application into compliance with Vista and Windows 7.
- Quickbooks export/import interfaces in Delphi 2006
- Design and development of Excel export applications in C# using the NPOI libraries for use with the inventory system.

MarketMap.com (2008-Present)
Projects:
- Website support in the area of customer and subscription management using various technologies, but primarily in PHP.
- Development of a prototype trading alert "chat" room in PHP and Javascript under Apache and Linux.

HighwayTwo (2008-2012)
Projects:
- (Re)design and development of a wholesale product ordering website. Raised online sales via this effort from less than 5% of orders in 3Q 2009 to over 18% of orders by 3Q 2010. [C#/AJAX/ASP.NET 3.5]
- Various projects enhancing internal budgeting tools.
- Ongoing support of backroom processes supporting the sales website
- Initial requirement specification and refinement for ERP replacement

ICOP (2008)
Projects:
- Development of new dashboard camera interface in C# for use by law enforcement across the country. [.NET 3.0]

CapitalOne Home Loans (2007 – 2008)
Projects:
- Contract programming and support. Responsibilities included development of new reports in Crystal XI, maintenance of legacy Point of Sale (POS) system in VB6) for mortgage prospecting, conversion of legacy code into C# for new prospecting system (primarily data import/export functions), maintenance of credit reporting services implemented in SOA fashion, SQL Server 2005 query tuning in addition development and maintenance of stored procedures and teaming with other developers for database and system interfacing requirements for the intraweb website. The conversion to the new system involved some use of MVC and WCF technologies. [VB6, C# 3.0, ASP.NET 3.0]
- Reviewing work of and assisting other developers and DBAs with SQL Server 2005 schema design plus stored procedures

For A Real Estate Services Firm (2004 – 2007):
Projects:
- Ongoing modification and enhancement to a web-based lockbox/key inventory tracking system involving use of JavaScript, ASP, MS-SQL Server with over 100 databases, and XML. [C++, ASP, SQL Server 2000]
- New web applications using ASP.NET 1.1 and C#
- Implementation of a new key product involving field configuration of firmware, a remote update client with automatic version updating. [C++, Cypress Assembler]
- Implementation of an XML/RPC call layer to support remote client software using multitier design. [C/C++/Windows]
- Ongoing modification and enhancement of system services supporting background processes in the web application utilizing C++, COM, and C#
- Design and Implementation of ASP.NET website(s) in C# to automate backroom customer setup processes and data importation
- Equipment testing of prototypes from a third-party manufacturer to ensure that the equipment meets specifications.

- Second-line customer support of the applications.
- Worked in conjunction with executive management for the operation, planning and management of customer-facing systems.

For An Insurance Services Firm (1998 – 2005):
Design and Development projects:
- Design and development of an insurance property risk survey system for a national insurance auditing and loss control firm. Incorporates XML for the datafile format, OpenOffice documents for presentation, and the wPDF component for PDF output. Developed mostly in Delphi 7.0 with some VC++ 6.0 ActiveX interfacing. (2003-2004)
- Rewrite of a legacy survey application report system utilizing Delphi 7. (2004)
- Coaching newer developers at the firm with various aspects of the legacy application systems.
- Development of a Unix server/TCP protocol simulation to interface legacy field systems with new in-house systems being developed. Involved login verification, file upload/download, connection tracking and data translation in a multi-threaded application.
- Conversion routines for transporting data from COBOL legacy ISAM files to MS SQL Server 2000. Written in VB6. (2004)
- Development of several setup front-ends which allow end-user selection of various products to install using Delphi 7 and MS/Visual C++. (2000-2004)
- Modification of Samba-2.2.8a in C to allow locking protocol interoperation between AcuCobol Unix runtimes and Windows AcuCobol runtimes on shared files. (2003)
- Backporting of communication modules written in Visual C++.NET to Visual C++ 6.0 for inclusion in an older product which provides electronic order submission for a national insurance auditing firm. (2003)
- Development of an interface between legacy systems and the Heat call-tracking system to facilitate automatic update of customer and employee contact information. (2003)
- Design and development of UNIX network utilities and scripts to detect various server statuses, e.g. if an FTP server is available and accepting connections, and use that status to control job processing. (2002-2004)
- Development of communication software under Windows XP utilizing the wininet library, Visual C++.NET ATL components, VB.NET, and VBScript to replace an older package which does not function under Windows XP. This software is currently in use by over 100 field support staff for a national insurance auditing firm to provide connectivity between the field and various branch offices. (2003)
- Design and development of a standalone Unix SMTP client in support of email based report delivery through one of several mail servers due to large transmission volumes. (2002)
- Development and support of automated email customer report delivery facility for a national insurance auditing and survey firm, utilitizing Perl for translating reports into RTF, C for network transport, and Korn shell scripting under SCO OpenServer 5. (2001-2004)
- Development of file translation interfaces using Perl, and Korn Shell Scripting under SCO Unix for B2B file processing (2001-2004)
- Development and support of network services under SCO Unix (OpenServer) for data transmission from a 1000+ person field force utilizing C and BSD socket programming. (2002-2004)
- Development of report translation servlets under Tomcat 3.2 and assisting other developers in utilizing Java for other servlets and JSP pages. (2001-2003)
- Design and development of a system that extracts photos from scanned pages and integrates them into insurance risk surveys for a national insurance auditing and loss control firm. Developed in VB 6 and VC++ and uses MSSQL Server 7.0 for back-end storage. (2000)
- Code enhancement and new development related to a merger for a national insurance auditing firm as a subcontractor for another local contracting company. (2000)
- Year 2000 code analysis, modification and deployment for a national insurance auditing firm as a subcontractor for another local contracting company.(1998-1999)
- Development of an adapter DLL and Word macros providing a JNI interface for a website to produce formatted documents in MS-Word per client request. (2003)
- Development of ActiveX integration objects facilitating communication between SQL Server and Lotus Notes. (2001)
- Development of a client/server application to pass orders from a website written in Lotus Notes to a legacy Unix system utilizing Lotus Domino COM classes, VB 6.0, and Unix C. (2000-2001)
- Enhancement/new development for a Windows 95/98/NT insurance audit and survey ordering program using VB 5.0. (1999-2003)

Planning and Analysis Projects:
- Project planning support for mission-critical file conversions required to enhance legacy applications. (1999-2004)
- Initial development of data warehouse and data mining routines for insurance surveys at a national auditing and survey firm utilizing Korn shell scripts, Perl, ODBC to SQL Server, and C++. Task also included translating formatting information from an

obsolete word processing format into RTF for later report presentation along with removing the formatting in an additional copy to be used for data mining activities. (2002)

- Infrastructure planning, integration and development in support of a website developed using Lotus Notes, LotusScript, Visual Basic 6.0 and SQL Server. Task included database synchronization between legacy applications in COBOL and SQL Server along with updating the related Lotus Notes documents accomplished via ADO, SQL Server stored procedures and Domino Backend COM classes. (2000-2001)
- Analysis and support of legacy applications written in AcuCOBOL. (1998-2004)
- Development and customization of various B2B system to system interfaces for a national insurance audit and survey firm. (1999-2004)

For A Local Veterinary Hospital (2000 – 2010)
- Installation of a new facility including network planning, design, and deployment of gigabit ethernet to the desktop, server and firewall configuration and installation.
- Website programming to provide webcam capability for animal daycare and boarding using ASP 3.0/ASP.NET (VBScript / C#) (2003)
- Design and development of upload utilities providing password protection of images and dynamic enabling/disabling of cameras for the animal boarding webcams. This was developed using Delphi 7.0 (2003)
- Network and some application support in a mixed Windows/Linux environment (2000 – present)

For A National Non-Profit Group (1996 – 2006):
- Development of communication adapters under Windows XP to allow older TAPI applications to function using Delphi 4 (2003)
- Development and support of a distributed (decentralized) Order Entry/Accounts Receivable system in VB4/VB6. (1996 – 2004)
- Mailing List tracking and duplication cleanup. (1998 – 1999)
- Responsible for the accounting system operation and support from 2Q 2005 until 1Q 2006 after the accountant who had been running the system passed away. Turned over responsibilities to the new accountant and treasurer after successful completion of the 2005 annual audit.

For Various Churches around the KC Metro Area (1996 – Present):
- Development, documentation and support of end-user oriented audio-visual control software using Delphi 4, Windows Networking and PowerPoint automation. This software utilizes a wireless peer-to-peer network to control PowerPoint presentations during worship services at a local church. (2002)
- Development of several setup front-ends which allow end-user selection of various products to install using Delphi 7 and MS/Visual C++. (2002-2004)
- Planning, installation and configuration of a LAN at a local church, this also included installation and configuration of a Linux server which provides gatewaying/routing services between the LAN and the Internet via an on-demand dial-up link. (2000)
- Development/customization of church membership management software utilizing MS-ACCESS. (1997 – 2002)
- Development of several Macromedia Flash movies for website presentations. (2000-2004)
- Design and development of a multiuser annulment case tracking/document production system for the Archdiocese of Kansas City in Kansas tribunal office, along with providing remote installation and support services (this job was handled via telecommuting). Written in Delphi 7 with Firebird DB Engine.
- Enhancement of case tracking system with document scanning/management capabilities (Delphi 7).

Various other clients and projects:
- Development of 32/64 bit video filters and decompressors for DirectX9/10 in C++ (initiated in VS2012, migrated to VS2015)
- Development of automated stock trading models for several traders in the Kansas City area
- Development of an e-commerce site for a startup stock-market tracking firm selling their analysis reports over the internet. (C# / Delphi 2006) (2004 – present)
- Development/adaptation of a financial reporting system used in governmental accounting for Meade, KS. (Delphi 2006) (2007)
- Development of a stock index forecasting tool based on specifications and information from a local stock-market tracking firm.
- Process monitoring and automation using Delphi 2006 for website updates (2007 – present)
- Development of an e-commerce site for a startup selling gift-baskets over the internet, along with network installation and support of that company.
- Development of an ftp-based automated file upload tool with error checking and status notification via email and text messaging.
- Diagnosis, troubleshooting and correction of installation problems encountered with custom software written by HouseMasters, Inc. for use by their franchisees. When limited support was provided by Housemasters, one of their franchisees engaged P/K Solutions, Inc. to correct the problem and involved writing limited diagnosis routines in Visual FoxPro and Visual Basic. This solution is currently being presented as an option to other franchisees in the Kansas City area. (2002)
- Development of a financial analysis tool for use by CPA firms written in Delphi 4. (1998 – 2000)
- Enhancement of an open source POP3 client using C under Linux. (1999)

- Development and deployment of an online quizzing/automatic grading system written in Java and C++ for an instructor at a local community college. (1999-2001)
- Development of a small utility using Delphi 4 and DDE for integration with the Goldmine contact management package for another software firm. (1999)
- Website development for a national evangelical ministry. (1998)
- Website development for a local real-estate appraisal firm utilizing FrontPage 98. (1999-2000)
- Network support for a local real-estate appraisal firm using Windows 9x peer-to-peer networking. (1997 – Present)
- General Accounting customization/conversions for small accounting firms. (1994-1998)
- Data Collection modules for inventory asset tracking at an international telecommunication company. (1998 – 1999)
- Analysis and support of legacy applications for a medical testing laboratory. (1996 – 2002)
- Website development and on-line shopping support including credit card processing for a Kansas City metro based coin dealer. Utilized ASP scripting, Macromedia Flash, Dreamweaver technologies and involved heavily customization of the Comersus Free shopping cart application for the unique needs of the client. (2004)
- Most of this work was performed on Windows platforms utilizing Delphi, Visual Basic, Visual C++, and MS-Access.
- Performed some part-time teaching in Computer Science at Park College.
- Integration of precious metal/coin inventory into Wordpress/WooCommerce
- Automated blog posting into Wordpress for a coin dealer

Epiq Systems, Inc. 2013 – 2017
Senior Software Engineer

- AACER legacy website development and maintenance (ASP.NET forms, SQL Server)
- AACER2 website development and enhancement (Javascript, KnockoutJS, C#, MVC 3 & 4, SQL Server)
- AACER backroom systems for retrieval and extraction of case data from bankruptcy court sites (C#, SQL Server)
- Reengineered JSE search processor using TPL to increase search and extraction performance. (C#, SQL Server)
- Reengineered ECF court extraction processor for enhanced maintainability and performance through code refactoring and optimization of regular expressions and stored procedures (C#, SQL Server, Regular Expressions)
- Lead engineer for application migration to new QA datacenter (dress rehearsal for Production migration)
- Lead engineer for application migration to new Production datacenter (Kansas City site to Las Vegas site)
- Set up Azure VMs and webservices plus databases in preparation for an outsourced contract initiative

1996 - 1998   **Consultant at CTG**
System Engineer
Involved in analysis/development/implementation of several Datamarts utilizing Oracle 7 (SQL and PL/SQL), Korn shell scripting, Oracle Reports, Perl scripting, and some C++ on RS/6000 and NCR systems. Received client award for one of the Datamarts. Also provided knowledge transfer of UNIX skills to client personnel.

1995 - 1996   **Osborn Laboratories**
Systems Analyst/Project Manager
Primary duties were new system development, with some enhancement and maintenance of existing systems. The position also involved project leadership of team members. Projects included reengineering the data transmissions system, development of special-purpose databases and applications used to cultivate new business and general upkeep of the existing interface between the laboratory information system and the data transmission system. Initiated the use of CASE tools to improve quality in the implementation of the transmission system. Built the transmission system using UNIX, C++, CGI scripts, and HTML across Windows Netscape, Mosaic and Unix Mosaic.
Other projects included performance analysis of and enhancements to the laboratory information system as a prelude to the reengineering of the laboratory information system.

1990 - 1995   **Consultant at CTG**
System Engineer
- Responsibility for developing an electronic insurance claim clearinghouse. This included system analysis, specification, design, implementation, documentation and testing for the entire product. Led 2 other CTG engineers in this project. Implementation was accomplished on IBM-PC (compatibles), MS-DOS and Novell Netware 3.12 using Borland C++ and Paradox.
- Presentation of object-oriented concepts in a series of seminars to an investment banking company.
- Assisted in the development of a laboratory information system for an insurance medical testing laboratory. Primary duties were the design, implementation, and testing of the interface between the laboratory information system and the existing transmission and statistics systems. This interface was developed under SCO UNIX System V.4 using C and COBOL.
- Enhancement of legacy systems for an insurance medical testing laboratory using COBOL on and NCR Tower running Unix System V.3.

- Hardware and communication setup/configuration for a construction company using an IBM RS/6000 running AIX. This project also involved developing some of the initial system management procedures.
- Enhancement and maintenance of a multi-site inventory system for an agricultural products company. Enhancements included the analysis and development of new reports and data entry screens primarily using INFORMIX-SQL. Maintenance involved coordinating software updates to the multiple sites controlled by the company. The development platform was an AT&T 3B2 running Unix System V.3.
- Reengineering a budget forecasting system for an aviation electronics manufacturer. This involved the development of approximately 10K lines of mainframe batch COBOL across 10 new programs. The reengineered system also included several reports that were not possible to generate in the original system that was written in FORTRAN. The development was performed on an IBM 43xx running DOS/VSE.

1986 - 1990   **Tenet Corporation**
Systems Manager/Developer
Responsible for the analysis, design, development, testing, maintenance, and some marketing of a graphic arts process control system. Portions of the development involved the use of PC's as intelligent terminals, scanners, and robotics. The bulk of the development was performed with a Plexus P55 using Unix System V.2. This system involved the creation of approximately 100K lines of C and ESQL/C and approximately 2K lines of Bourne shell scripts. Was also responsible for supervising several part-time consultants and one full-time consultant during this period.

1984 - 1986   **Gilbert/Robinson Restaurants, Inc.**
Systems Programmer
Primary projects and duties were the enhancement and maintenance of the Restaurant Supply Inventory System. This also included maintenance of system JCL.
Other projects:
- Enhancement and maintenance of the Accounts Payable and Fixed Asset Management portions of the General Ledger System, including maintenance/modification of system JCL.
- Design and preliminary implementation of a new Account Receivable system using the Powerhouse 4GL and the HP Image database system.
- Ongoing data conversions needed to process data from the parent company's IBM mainframe on the local HP 3000.
- Design, development, and maintenance of system utilities to support the data processing operation.
- The work in this position was performed using FORTRAN, SPL/3000 and some COBOL.