

Pennington Technical Arts, L.L.C.

D-U-N-S 12-586-2339 est 1995 Woman Owned, Native American Owned, Small Business

DATABASE DEVELOPER | APPLICATION DEVELOPER

*Providing technology solutions that support strategic business objectives and operational efficiency.*

- ⇒ Extensive experience in building custom, complex database systems, and applications; utilizing tools spanning multiple platforms and languages—modern and legacy systems.
- ⇒ Expert in reducing manual processes and boosting cycle times.
- ⇒ Recognized for accomplishing database development tasks, previously regarded by colleagues as needing a large IT team to accomplish by meticulous analysis of clients’ needs.

**Creative, resourceful, and innovative Application Developer** with unique blend of science and business **software database development** experience within various environments, such as: **Aerospace, Scientific Research**; including imagery analysis, **Oil&Gas, Insurance, Sporting, Medical Devices, Government entities** (state and fed), various **Business automation, Pet-help industry, and DOD.**

Capable of designing applications engineered for web, stand alone, and legacy systems. Productive in both team-based and self-managed projects and dedicated to maintaining up-to-date industry knowledge and IT Skills. Former Security Clearance.

**AREAS OF EXPERTISE**

- Website Design & Development*
- Requirements Gathering & Analysis*
- Object-Oriented Programming*
- Technical & End User Documentation*
- Problem Analysis & Resolution*
- Software Testing & Troubleshooting*
- Business Automation*
- Image Processing, Robotics, & AI*
- Stand Alone & Legacy Systems*
- Data Modeling & Warehousing*
- Database Architecture*

**TECHNICAL REPERTOIRE**

**Languages & Object Oriented Design:** PHP, MySQL, JavaScript,LAMP, HTML,CSS, XML, JAVA, Facebook dev, IoT, jQuery, Python, JSON, RESTful API, Scratch, VB, VB.Net, VBA, ASP.NET, AWS, Yeoman, grunt, Bower

**Operating Systems:** Various Unix platforms: LINUX, UNIX, ULTRIX, APACHE, Red Hat, AIX, Fedora – shell script command and cPanel. DOS and Windows variations workstation and server side including: ASP.NET/Windows Servers, AWS to VM/CMS, CICS, to DOS

**Fields:** Over the years designing systems that involved these fields - Storage Systems and Management, SEO/SEM Marketing, Data Presentation, Mobile Development, Information Security, UID, Middleware Integration/API, Web Architecture and Development, Statistical Analysis and Data Mining, IoT, Agile Programming methods.

**Recent Specialties:** Designing relationships between QR barcodes and database systems. Gaming / Events / etc and IoT

**Other Legacy Database Management:** MS SQL, Visual FoxPro, IBM DB2, Clipper, Natual, dBase, Q&A

**Legacy Systems:** Mainframe and midrange: COBOL, FORTRAN, C, command line/shell, VM/CMS

—Software Development Projects—

Pennington Technical Arts | Boerne, TX | 15+ Years

**CONTRACT SOFTWARE DEVELOPER**

*Analyzed the needs/problems of various business and scientific clients across the US prior to designing, developing and testing solutions for top-notch companies and government agencies including: NASA, Valero & Diamond Shamrock, Glock-Mason Claims, San Antonio River Authority, Southwestern Gas, EG&G Automotive Research, US Global, and Tesoro. A few notable, recent projects include:*

**LARGE SCALE PROJECTS INCLUDE:**

**(2017) “MOBILE” WEB APP PRODUCT FOR CITY WIDE SHELTERS USE (SAN ANTONIO, THEN BEYOND)** Trademark pending. MyShelterer.com (PHP, MySQL database application designed for mobile devices and tablets feeding Facebook posts)

**(2017) IOT MEDICAL DEVICE PROJECT** Currently in development. (Other Medical Device projects in the past – Initial prototype design of mobile system for managing recidivism evaluations. – NSF grant for AIDS screening device.)

**(2016) TWO LARGE SYSTEMS THAT ARE ABOUT TO BE RELEASED:** Both have been fully US trademark registered. Database systems that include the web side and mobile. One for the gaming & fundraising industries <https://www.youtube.com/watch?v=ok7xAnKMxpo&feature=youtu.be> and the other for security of clients' information.

**(2015) SPORTS SCOUTING:** Top football scout for universities lacked necessary technology to provide evaluations and statistics on high school football players for Universities across the US.

**Solution:** Built complex database system written in PHP/MySQL/JavaScript that stored statistics, evaluations, ranking, notes, photos and videos of game highlights for high school football players on a frontend website that could be accessed from workstations and tablets ([www.scoutsystem.com](http://www.scoutsystem.com)) by universities across the US.

**Result:** A top tool that garnered the stamp of approval from NCAA and certain aspects of this tool were made available to the public as of March 2014. Majority of tools were made available to universities and high schools across the US via subscription access. This package was then used as a selling tool to attract additional universities who had never utilized the Scout's services before.

**LOCAL GOVERNMENT:** To boost local economy by increasing tourism to Kendall County Historical Commission (KCHC) in TX that lacked a web presence.

**Solution:** Built an interactive, database driven website that remains dynamic with a self-written Content Management System. Incorporated various media to allow the historical aspects of the KCHC to be fun to read/learn ([www.KendallCountyHistory.com](http://www.KendallCountyHistory.com)).

**Result:** Site receives daily hits averaging 25% return visits after being officially launched in Feb 2014. Tourism expected to rise during on- and off- peak seasons.

*"This is one of the most impressive websites out there that I have ever seen. Jay has developed and hosted it as a database-driven interactive experience."*

— Boerne Commissioner  
Gene Miertschin

**INSURANCE CLAIMS:** To transform a manual paper-based system of an insurance catastrophe based company for 2,000+ independent adjusters into an automated paperless system accessible from any remote device while mobile in the field.

**Solution:** Developed a central database system along with the following custom written systems: internet based claims, employee monitoring, deployment, telephony based reporting, call center reports and applications. Utilized PHP, MySQL, JavaScript, HTML under UNIX/Linux platforms, and communications programming of FTP and XML for automatic data flow.

**Result:** Centralized system allowed storage of adjuster profiles and facilitated receipt of loss claims electronically. Hence, efficiency in assigning claims improved 100% and allowed for **real-time progress monitoring** and **faster deploying times for loss claims in cue**. Due to enhanced efficiencies in claims handling processing, company became a multi-million dollar company that serves North American continent and the Hawaiian islands.

**PET RESCUE:** Designed numerous pet assistance systems to help lost pets reunite with their owners, reduce number of euthanized pets in pounds due to space issues, and helping adopted pets find homes.

**Solution:** Created a database driven website that links lost & found (rescued), impounded, and pets ready for adoption into a major network within San Antonio metropolitan area. Similar systems developed for Boerne, Bulverde, and working on Kerrville. ([www.SApets.com](http://www.SApets.com), [www.BoernePets.com](http://www.BoernePets.com), [www.BulverdePets.com](http://www.BulverdePets.com), [www.KerrvillePets.com](http://www.KerrvillePets.com), and [www.LostPetFound.com](http://www.LostPetFound.com) - US wide). Also developed a tag and broadcast tool for pets in gated communities which is soon to be released.

**Result:** The San Antonio site **receives 3,000-7,000 hits per day** thus saving numerous pets' lives on a daily basis. These projects have also gained significant local media coverage (print and television).

#### SMALL SCALE PROJECTS INCLUDE:

- Designing systems of QR barcode to database relationships for various applications
- Web application for an IP-POE access control system using PHP on a Windows IIS server with SQL server.
- Web application for a mineral rights management company using ASP.NET, Visual Studio 2010, and SQL server.
- Research on engineering programming of chipsets for controlling devices using C and chipset based compiler/IDE.
- Maintained clients' legacy systems and have also modernized older custom software by redesigning their systems to ensure they meet today's changing industry needs using more modern day languages and platforms.

#### EARLY CAREER PROJECTS—RESEARCH-ORIENTED

**GAS & OIL:** Served as contracted software developer of various oil/engine testing companies. Also functioned as Technical Liaison/Systems creator of registration/monitoring entities operating within the European and American Oil additive industries. Utilized Clipper, XML, HP mid-range, and VFP.

**AEROSPACE:** Served 5 years at NASA and was instrumental in developing numerous database applications for research purposes. Handpicked to **serve on Challenger Accident Investigative Team with Secret Clearance** to focus on software programming of image analysis of the launch recordings. Catalogued and managed large inventory of all visual digitized imagery media related to Challenger accident which contributed to determining cause of launch accident.

**SCIENTIFIC-RESEARCH:** Wrote software to analyze satellite imagery over Russia and database applications for mapping and cataloguing all imagery from shuttle missions. Developed software analysis programming of astronaut exercise equipment while in space and **pioneered database development related to future Space Station experiments.**

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## Education

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**Bachelor of Science, Computer Science, Math & Systems Design**  
UNIVERSITY OF TEXAS, SAN ANTONIO

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## Published Papers

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**A Simulation Software Package for Modeling Crop Characteristics and Spectral Response.** J. Pennington and Dr. R.R.J. Mohler, 1985. 10<sup>th</sup> Annual Technical Mini-Symposium on Aerospace Technology, Houston, Texas.

**Documentation for the Simulation Software Package of the Regression Estimation Research Project.** J. Pennington, Dr. R.R.J. Mohler, J.L. Lundgren, and C.T. Sorensen, 1985. Lockheed Technical Memorandum, Houston, Texas.