Personal Resume

As Of 2/4/2024 For

(David) Michael Neeley

Electronics / Avionics / Aerospace / PMEL Technician
Electrician / Maintenance / Programmer / Engineer / Mechanic

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Experience

5 Months to Present, UFP Harness Division / Vintage Sound at Great Lakes Trader (concurrent):

UFP: “Find things that need done and take care of them. (job description) This has become a wide range of projects ranging from plumbing, machine building and repair, electrical and software development. In addition, I have provided Microsoft Office and general PC support.

Vintage: Set up and man repair shop for vintage and tube stereo and musical amplifiers. Equipment includes a wide variety of electronics from the 1960s, 1970s, 1980s and 1990s as well as modern high end vacuum tube pre and power amplifiers.

Nov 25, 2022 to Present, Self – Home Infrastructure Update:

Update home domain controller from 2012 to 2019 (complete). Repurpose old server to Ubuntu 2022 LTS PRO (complete). Update ESET Protect server. Update Ampache, Nextcloud and NAS units. (complete) Update software, physical book library and physical media libraries. (in work) Vulnerability scans on all Windows 10 workstations (scheduled). Start 2 hardware PCB designs. Add security cameras. (in work)

Feb 21, 2022 to Nov 22, 2022, Actalent Services - Engineering:

Contract electrical engineer at facility in southwest Michigan. Battery-inverter based all electric mobile kitchens.

Responsible for improving existing electrical designs, vetting suggested improvements, rapidly acquiring knowledge on new technologies and making that information available to local and corporate decision makers. Have traveled to the east coast to perform failure analysis on units in the field resulting in design changes. Developed software to extract information from AutoCAD drawings using Microsoft Excel / VBA. (Can also program VBA in AutoCAD and could probably dust off LISP knowledge.) Created or modified CAD schematics and harness drawings. Initiated transition, fleet wide, to J1772 connections and protocol for charging in lieu of 50 amp RV. Update will eliminate charge cord failures and provide added charge capabilities.

Aug 11, 2021 to Feb 18, 2022, Atlas Chem Milling:

Mechanic at the Elkhart Indiana facility.

Responsible for maintaining all equipment in a rotary die manufacturing plant. Includes working with a number of caustic chemicals. Maintaining photographic, etching, machining and plant support equipment. With one additional maintenance mechanic we covered the facility 24/7. I have been contracted by this company to reverse engineer and produce electrical prints on one piece of undocumented equipment.

Aug 1, 2019 to Aug 6, 2021, Bimbo Bakeries:

Mechanic at the Elkhart Indiana facility.

This facility has ingredient delivery, mixers, dough distribution and molding, proofing, baking, cooling, slicing, packaging and preparation for shipping. There are also support systems, glycol heaters and chillers, compressors, cooling units and other ancillary equipment. I am responsible for repairs on any item that fails in any way, unless the equipment is specifically relegated to a contractor (compressors for instance) and, failing a repair, providing an alternative mechanism if possible.

I continue to learn systems as they fail (there is no formal training program) and am now able to apply understandings gained on one system to other similar systems. I also am starting to exponentially understand how systems interact from one end of the building to the end of each product line. I have selected a few systems and am striving to slowly work out all of the failures that have persisted in them to completion as I have time to do so.

My primary function is that of mechanic. I do, however, support my fellow mechanics when called on with electrical and control troubleshooting. This is done with absolutely no access to the logic information that drives a highly automated plant and frequently without electrical prints. I freely share any and all information on methods and mechanisms for doing so.

There are in plant policies that push for recognition of individual accomplishments. I am actively disinclined to be involved in any of them preferring instead to simply be an asset for the people I am working with.

Oct 2015 to Jun 2019, Renegade RV:

Electrical engineer and IT for the two plants comprising Renegade RV motorized and non motorized operations. Responsible for NEC and RVIA compliance in product throughout both facilities. Designs include integration with electronic (multiplex) control systems, harness design, new equipment evaluation and systems troubleshooting. Motor homes include data and remote control subsystems, solar power assist, inverter power with multiple systems integration, HVAC and auxiliary generator power. During this time I designed the data and video systems for the mobile police command center for Coeur d'Alene Idaho as well as other specialized vehicles. Design work was done on AutoCAD 2007 and AutoCAD LT 2018. IT included 2012, 2008 and 2003 servers as well as approximately 85 workstations 2 VM hosts and 6 VM servers. I provide troubleshooting, repair, user support and network administration. When acquired by REV group, I did all updates, virus scans, security vulnerability scans and patches from home after hours.

May 2015 to Oct 2015 , American Petroleum:

Responsible for composing and / or generating emails (using a heretofore unknown skill of being able to type at dictation speeds discovered during my interview). Researching various items to include public documents, legal interpretations and other interpersonal functions typical of an administrative assistant. In training to handle fuel movements between our primary supplier (Marathon) and our affiliated chain of truck stops (Gallops). I was also the primary instrument in maintaining a wetland restoration / mitigation as well as a neighboring 8000 gpd septic treatment system. (in distress after 10 months) I assumed responsibilities of maintaining a Windows 2008 domain with 4 IPsec (was 5) tunnels into a central server, adapting an existing Windows 2003 Server specifically purposed into a general http server as well as adding an in house IMAP server to allow email sharing across workstations, OS's and email clients. Outlying workstations at connected subnets are being slowly properly domain joined as time permits. Maintenance includes electrical troubleshooting for the above, commercial electrical systems in the truck stops, power, electronics and information lines to fuel distribution dispensers. (Mostly Wayne). I provided service to plumbing, shower and other bathroom fixtures, generating a previously non-existent documentation library and electronically controlled signage.

Jan 2015 to May 2015:

Cared for terminally ill spouse.

Jan 2004 to Jan 2015, Fleming Sales:

Responsible for development of new product lines and technical support for electrical systems on motor homes, toy haulers and towable RVs. Designed in AutoCAD 2005 and then Autodesk Inventor 9 numerous sheet metal components mostly sliding trays for batteries, freezers, consumer electronics and cargo.

I performed formal and informal training of technicians and engineers on the use, installation and troubleshooting of electronic control systems manufactured by Intellitec and TRC Corporations as well as technical support of sales personnel. I traveled out of state for repairs beyond the scope of dealerships and local repair facilities (as well as training at local venues). Similar support is provided for mechanical constructs some of which I either designed or maintained from off site sources. This was done at multiple sites on the west and southern coasts and various locations throughout the Midwest.

I worked with principals by providing failure analysis at the component level for electrical and electronic subsystems.

I maintained building electrics, telephone, machine repair, plumbing and the computer network. I maintained web sites for the RV divisions of my employer including the physical servers. (self hosting)

Our network included a VPN into a foreign sub net from a Canadian company as well as VPN into a translated sub net in my home. These computers include OS variations from Windows 98SE to Windows 7 as well as 1 Linux machine which serves as the Canadian VPN endpoint.

Final projects included:

Evaluation of production methods with the target of increasing productivity / decreasing wasted time and other assets.

Redesign of two cargo tray lines one manual, one motorized, to use largely the same component base to reduce costs on both.

Working with CSA to bring new products into CSA certification compliance.

Design and manufacture of microcontroller based stepper indexer with 3 axis interpolation.

All designs include PCB design, circuit design, firmware and prototype construction. On leaving I was porting CNC like software previously written for engraving equipment to Windows and possibly Linux.

Our building had been upgraded to 480vac service in preparation for moving Fleming more heavily into manufacturing. I will be responsible for rewiring much of the building for incoming equipment and more efficient lighting.

I rebuilt two CNC engravers purchased from eBay and supervised the overhaul of two additional engravers (Cartesian robot rotary cutters) for use in creating dash panel inserts including patching software and creating cables. These have been in production for some eight years.

I am largely self equipped for tools and test equipment.

I left doing a significant portion of the production machining due to decreased work demand in other areas.

My peripheral duties included sourcing and purchasing production components and services as well as tools, equipment and building maintenance items.

Jul 1995 to Jan 2004, Positron Corporation:

New products engineering. Responsible for development of new product lines and technical support for electrical systems on class A, B & C motor homes. During this time, wrote from scratch and compiled new machine handling software for 3 axis engravers (in

gwBASIC) Currently rewriting in C++ for Windows. Rewired plant electrics end to end to meet NEC. Provided numerous low cost changes in production techniques to facilitate more efficient operations. Designed and manufactured, from scratch, 2 universal / programmable wire harness test stations with 512 termination points each. Designed and wrote software to allow end strip automated wire stripper to process jumpers with multiple mid strips. Acquired extensive 2D/some 3D CAD experience (AutoCAD 14 / 2002 / 2005) as well as programming in AutoLisp & VBA. Designed new tooling for terminating presses. I was also responsible for all plant maintenance including air, hydraulic, plumbing, electric, electronic and automated systems. I did sourcing of parts/services for plant maintenance and some production as well as investigation into field failures and non conformance issues. I designed end to end wiring and pneumatics on a new laminating machine which included 42 heaters on two rollers with switch selectable zone width. I was solely responsible for all company maintenance including electrical, plumbing and pneumatic. Equipment compliment included 13 CNC engraving machines and 2 CNC routers. I designed new high speed spindles to reduce maintenance costs by using bearings that were 10% of the cost of the original design. My customer service and technical support functions include troubleshooting and design assistance on all 12 volt systems including distribution, charging and a wide range of accessories. In this capacity I worked with manufacturers, service centers and end customers both on site and via telephone and/or email.

Apr 1994 to Jun 1995, Syndicate Store Fixtures:

Maintenance of a wide variety of manufacturing equipment used in the manufacturing of retail sales fixtures for K-Mart, Wal-Mart and a wide variety of other major vendors. Including but not limited to: Presses through 200 ton (brake, punch and hydraulic), spot, arc, MIG, TIG and plasma welding equipment (In both stand alone and automated applications), cutting, bending, slotting and handling equipment (mostly semi to fully automated), welding robots and carton making machines. Automated equipment processors include Allen-Bradley SLC-100/150 through PLC-5 with an above average working knowledge of troubleshooting procedures using a host computer. Responsible for electric, control, mechanical and some machining operations. Also responsible for plant electrics including conduit run and drops for 120/208/240 and 480, building and installation of control panels and disconnects. Mechanical maintenance included building of metal structures from existing prints, measurement and adjustment of sliding surface clearances, repair and replacement of worn or defective mechanical parts including some machining or other fabrication and movement, placement, leveling and setup of equipment. Additional mechanical included hydraulic systems, air drops and machine lubrication including repair of self oiling systems.

Apr 1985 to Apr 1994, Self Employed:

(overlapping with below paragraph) provision of part time DP, programmer, hardware and production equipment maintenance for several companies. Specializing, but not restricted to, large database applications, communications programming, network applications, extensive Windows support, CAD system installation and configuration (AutoCAD 10,12,14,2002 Genericad levels 3, 6 and 3D), customization and LISP programming and matching system and task requirements. Support including software installation, integration, backup scheduling, data placement/management, hardware recommendation/selection and training. Programming packages including (some still ongoing) sales history, vendor list maintenance, maintenance history and custom quote package for local manufacturer, full spectrum software for local publisher including subscriptions, ad progress maintenance, bulk mailing postage processing, automatic upload/download of transient data bases, and race scheduling for local horse racing association. Included in special software is extensive programming at operating system kernel level for TurboDos networks. (older DOS) Also provided engineering services to small companies from selection of devices for specific applications to small circuit design from concept to prototype. Schematics and boards were laid out on CAD system and manufactured by piece using photographic method. Circuit types included op-amp, uProcessor peripheral control, RF and digital applications. Board design continues to date. Production equipment maintenance included insulation extrusion, injection molding, quality and temperature monitoring, process and control for individual equipment and automated / semi automated assembly and production lines.

3 1/2-YEARS:

Overflow maintenance for other service facilities, provision of a ‘service department’ for a number of video rental stores and on site technical service for industry. Equipment includes VCR, Laser disk, CED disk, computer equipment, video games, commercial FM, test equipment, manufacturing equipment, process control and all other unusual type items for facilities lacking talent, test equipment or time. Some specifics include automated cutter/strippers (wire), extrusion machines, cable handling equipment and controls, injection molding machines and finished product test/QA equipment.

3 1/2-YEARS:

Overlapping with above, owned, sometimes operated and performed all but major overhaul of OTR tractor trailer equipment. Including scheduled maintenance, repair of brakes, air and engine associated equipment.

Jan 1982 to Apr 1985, Bendix Field Engineering / STDN Ascension Island (NASA):

Component level maintenance and operation of Spacecraft Command Encoder, Honeywell H316 computer, Univac 642B 30 bit switching computer, Spacecraft CW ranging equipment, MODCOMP II 16 bit tracking computer, multi-function receivers, exciters, power amplifiers, cryogenically cooled parametric amplifiers, hydraulic and electric servo driven antenna systems and all other electric, hydraulic and dry air sub systems.

Jan 1981 to Jan 1982, WJXT TV Jacksonville Florida:

Maintenance of commercial television equipment including VHF transmitter (22kw), remote microwave, audio and video special effects, recording, switching and processing gear, satellite earth station, and tower work to 750 feet. Special effects include M6800 microprocessor editing system, 7 CPU (Z80) switching system, Chyron II 16 bit font generator, Z80 controlled video routing system and Heath H-8 general purpose computer.

Mar 1973 to Jan 1981, US Navy:

3 1/2 YEARS: Maintenance at component level and calibration of computer automated test equipment (NAVY VAST and HATS ATE) including signal generation from DC to 18Ghz, power generation from 0 to 500 volts, spectrum analysis, synchro measurement and generation, frequency, voltage, time and pressure measurement, sampling sweep oscilloscope, digital pattern generation and detection and precision pressure generation. Position included maintenance and calibration of all PME standards involved in calibration of ATE and Varian H620H/I 16 bit computer with 9 track vacuum chamber tape drives.

3-YEARS: Maintenance at component level of P-3 A,B and C aircraft avionics equipment including Navigational: TACAN, VOR, Inertial, ADF and PPI RADAR. Communications: HF, VHF and UHF. Electrical: Generator control and regulation. ASW: microwave receiving, processing and analysis, tactical coordination and plotting, audio spectrum analysis and plotting. Ground Support: all test benches for above equipment, LITTON MATS cart (Inertial Navigation automated test set) and electrical systems on aircraft ground support and servicing equipment. Also includes on the job training for metal fabrication and rudimentary machine work. (Lathe, mill etc.) Cross training included operation and maintenance of fork lifts, bomb loaders, portable power carts, jet engine forced air starting carts, Eriksons (movable bed aircraft freight beds) and aircraft tow tractors. Cross service training included Army ocean going tug RADAR.

9-MONTHS: Inflight radioman/tech on P3-A/B aircraft, familiar with operations of HF and teletype equipment and emergency in-flight procedures and repairs.

1972-1973, Glicks TV, LaGrange Indiana:

Maintenance of consumer electronics equipment including CB, Amateur Radio, Marine Band, home stereo, and television including tower installation and maintenance.

Prior: Starting at age 12 I would install and tune CB and antennas into semi tractors primarily for the mobile home industry. This would advance into minor repairs and eventually into component level repairs with the help of a math teacher/ham radio operator, a small repair shop in Elkhart Indiana and the LaGrange county library. At age 16 I would start the above job with a TV repair shop in LaGrange.

Miscellaneous Part Time

3 Year contract PCB manufacturing maintenance, engineering support & IT (including CNC component placement machines). 2 months reworking overhead crane electrical system in aircraft hanger. 16 weeks teaching 1st class FCC exam prep course (Florida Junior College). 6 months writing demo programs for DATA GENERAL computer sales facility. 6 months designing and building simple interface systems for home computers. 4 months manufacturing prototype circuit cards. 3 years repairing vending and video machines. 1 year repairing model railroad and remote control equipment. Design at board level, constructed, installed and programmed multiprocessor micro computer system for British C&W and companion machine for local school system. Components for combined systems included 7 processors, 2 intelligent Winchester disk systems, 3 8 inch floppies, 5 terminals, 3 printers, long line drivers (of my design) and tie in to local telex network. Continued training on system after take over of offices by BBC (British Broadcasting Corporation). Trained equivalent of 10th grade students at local school in programming techniques and problem analysis. Wrote drivers for Micropolis 8" intelligent winchester subsystem and Computime (c) clock/calendar board (automatic time update via system tick).

Education

School	Agency:	Year:	Time:
High School	GED	1973	2 years early
Aviation Fundamentals	USN	1973	2 weeks
Mechanical Fundamentals	USN	1973	1 week
Basic Electricity and Electronics	USN	1973	30 days
		(completed in 10 days)	
Avionics 'A' School	USN	1973	20 weeks
		(completed in 10 weeks)	
Advanced Avionics	USN	1974	26 weeks
Inflight Com/Tech	USN	1974	12 weeks
ARC 101 VHF Transmitter	USN	1975	1 week
ARC 101 VHF Receiver	USN	1975	1 week
		(1st in class)	
Miniature Component Repair	USN	1976	3 weeks
Integrated Circuit Practical	USN	1977	3 weeks
		(1st in class)	
Bell and Howell Home Entertainment	Home Study	1978	
VAST Automated Test Equipment	USN	1978	20 weeks
		(1st in class)	
Aircraft Corrosion Recog./Control	USN	1980	1 week
Miniature Repair QA/Supervisor	USN	1980	3 weeks
Spacecraft Command Encoder	NASA	1982	10 weeks
		(1st in class)	
Shuttle Command Voice Multiplexer	NASA	1982	2 weeks

	(1st in class)		
Solder/Wire Wrap Certification	NASA	1982	1 week
Tracking Data Processing System	NASA	1983	8 weeks
Antenna Control Console	NASA	1983	2 weeks
	(1st in class, possible scholastic record set or matched)		
Spacecraft Ranging Equipment	NASA	1983	8 weeks
	(1st in class, possible scholastic record set or matched)		
HVAC	Penn-Foster	2008	58 weeks, 97%
PLC	George Brown	2019	In Progress

General

Miscellaneous Qualifications:

FCC First Class commercial Radiotelephone Ticket (no longer available)
Commercial RADAR endorsement (no longer available)
State of Indiana Radio and Television Repair License. (no longer available)
State of Indiana Master Antenna Installers License. (no longer available)
State of Indiana MATV Endorsement. (no longer available)
State of Indiana CATV Endorsement. (no longer available)
Navy Miniature repair certification level E and S.
Navy Aviation Corrosion Identification and Control trained.
NASA soldering and wire wrap certified.
Operated and have been licensed for fork lift, cargo loading platforms, cherry picker, high ranger, bomb loaders and other aircraft support equipment.
NRA Pro-Marksman, Marksman and Marksman 1st Class small bore rifle qualification. (No longer active or interested in firearms)

Hobbies:

Computer hardware and software, reading (prolific) and music (Guitar, Dulcimer, Flute, Autoharp & Piano) Motorcycle riding, musical instrument collection, drones, reading.

Memberships:

American MENSA Ltd. American Handyman Life Member (now defunct)

Current Projects:

Creation of VBA interface to extract wire information from harness drawings for automated voltage drop calculations.
Maintaining a phone targeted web site of fast access reference data for work.
Rebuilding a 1999 Harley dresser as a show machine with the intent of shying away from all common customization techniques and concepts. For this I have enlisted high school art students who have neither experience nor interest in motorcycles. (Frame and engine were acquired after I 'inadvertently modified' an otherwise perfectly serviceable motorcycle.
Setting up motorcycle customization shop to include industrial sewing, automated embroidery, 3 axis cnc wood routing, vinyl cutting and templates for windshield engraving, 2 – 3 axis cnc engravers (for which I designed the controllers). Also included are additional machines and equipment for PCB design and prototype manufacture for motorcycle specific electronics. This equipment has already been acquired.
Generation of uController support mathematics on Windows based platform for assistance in clock selection, adc division, pwm generation etc. of Microchip ™ based controllers.
Generation of program on IBM-PC to simulate timing on relay driven press equipment. Design of device to time presses and/or return switch closure time in degrees for troubleshooting purposes. Design of 'Crevice Crawler' remote controlled vehicle including UHF camera feed, remote command execution for running wires in confined spaces. (i.e. between floors in joists, above suspended ceiling, in pipes, etc. Construction includes concept to prototype including, machining of all non commercially available mechanical parts, circuit boards and software. Self teaching Windows C++, Java, Visual Basic, Perl OOP, VBA and Foxbase languages. Rewriting machine handling software in C++.
Recently started, generation of control program for Singer computer controlled embroidery machines using VBA over Excel to replace software originally written (by Singer) for Microsoft 2000 OS.

Other:

Extremely fast learner (proficient in over 25 avionics systems with formal training in only 3)
Self taught in PCB design with 30 years experience.
76 and 80 out of a possible 80 points on Navy E-5 and E-6 exams respectively.
Last held security clearance: SECRET. (FBI background check with associate interviews.)
Letters of appreciation, recognition and commendation from Navy and Army as well as outstanding write ups on evaluations.
I work well with no supervision in isolated environment.
3 years periodical military supervisory experience with evaluation attesting to the fact that I was able to pick up overall shop

production by 300 percent by taking over one of two shifts.
I have supervised up to 15 maintenance and logistics personnel including the successful implementation of improved work flow, document, tool and publication control and formal on-the job training of personnel.
I am an avid motorcycle rider with 4 roadworthy machines and 1 project machine, 3 Harleys and 2 Honda Helixes. I admit to looking a little silly in riding leathers.
I collect books, with a 12’ x 8’ library plus overflow, musical instruments including some that most people have never heard of and music which gets stored in another library after being added to a self hosted music server available via internet.
I take care of Sherry’s puppies as promised. It would seem not very well.
LinkedIn Profile: https://www.linkedin.com/in/mike-neeley-a47437218/