

Zackery Sobin

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Summary: Electrical Engineer, with experience as a Naval-trained reactor operator and a strong software background.

As a personal hobby, I spent several years developing an IP-based drone control application. Other hobbies have included graphical programming, physics simulations, and the design of printed circuit boards. I will use my skills and work-ethic, to bring results that are intended to please my employer.

Education: 2007 – 2011 North Carolina State University BS Electrical Engineering degree
2004 7-Wk Navy E.T.M.S School (Nuclear-grade soldering/crimping/lock-wire training)
2000 - 2002 Navy Electronics's Technician School, Navy Nuclear Power school,
Navy S6G Nuclear Plant Training Unit

Work (May 2011-Present)

Experience: Schneider Electric

First contracted through Volt Workforce Solutions, then as an independent contractor prior becoming a full-time employee in December 2012. I have helped develop various software and hardware components of Schneider Electric's Oil & Gas offering and am familiar with its code base.

I've gained experience with the MODBUS and DNP network protocols. I have gained the ability to use SQL and have written several projects where SQL code is automatically and dynamically generated as needed.

I have helped develop several customer projects including Old Bridge NJ's wastewater SCADA , Los Angeles's Pitchess Detention Center fresh-water SCADA and Total Power's FMx Fuel Monitoring Solution.

I have extensive experience with ClearSCADA and have written a set of libraries that help me quickly implement customer projects. This includes spreadsheet macros that trigger the ClearSCADA automation interface to create points that are also imported into SCADAPack Workbench. I have developed ClearSCADA libraries to simplify the configuration and implementation of alarm redirection on numerous points. I am familiar with Altivar drives and am internally certified for the inspection of energized gear.

(Summer 2009)

Diosynth Biotechnology

Worked with contract electricians to study the load-centers and distribution panels of a relatively large pharmaceutical plant. I added this information to a MS Access database program, that I completed. Made extensive use of VB forms and SQL queries to create user-friendly search features based on room number, load type and other other criteria. I also created a feature to easily print updated panel-inserts, ensuring standardized information was available at every distribution panel, thereby increasing equipment up-time and improving the availability of information during possible casualty operations.

In the wake of a catastrophic failure of the plant's emergency generator system, I led the repair efforts by finding the emergency generator's GE Fanuc automation code on floppy disks in the engineering library. I studied the code to produce wiring diagram that electricians followed to replace the wiring. I improved the code and reprogrammed the PLC with a watchdog signal connected to the plant's site-wide SCADA to allow operators to remotely confirm operation of the emergency generator PLC program to assure that an automatic startup and transfer may be expected in the event of a power loss.

(Scanned copy of letter of recommendation at <http://zacktronics.com/letter1.html>)

(Fall 2008)

Appealing Products

Was the primary technical designer and programmer of an experimental ionization gas detector;

Completed two revisions of the system design. Gained experience with PCB design and assembly. Learned practical considerations about the design of highly sensitive instrumentation as well as good practices for cleanliness and assembly of such systems. Communicated with vendors about deadlines and inventory.

(2000-2006)

United States Navy

Served on board USS San Francisco for 3 years; qualified Reactor Operator, shutdown reactor operator, electrical operator, auxiliary electrician aft, reactor technician, control point watch and steam plant cleanliness inspector.

According to my separation evaluation comments I was listed as an expert technician “who's technical knowledge of both analog and digital electrical electronic circuitry... ..was instrumental in repairs to three control rod drive mechanisms... ..and an intensive reactor plant recertification test program”.

I was also listed as being a team player “who provided assistance to other divisions on several occasions, including the repair of six major electric plant breakers and two alarm instrument relays.”

As well as an Outstanding watchstander who “performed flawlessly as Reactor Operator following a six month shutdown period, allowing the ship to successfully complete an unprecedented... ..trans-Pacific surface transit.

I received an honorable discharge

(Scanned copy of separation eval comments at <http://zacktronics.com/letter2.html>)

Mechanical Abilities:

I've independently performed many automotive maintenance activities including replacement of belt-driven components, break pads/shoes, wheel-bearings, oxygen-sensors, CV-joints, radiators, engine-heads as well as transmissions on both cars and motorcycles. My father was a machinist and I've spent countless hours within a general purpose machine shop and within an automotive machine shop where I've observed such operations as the creation of dies for injection molding. I've assisted in the machining of engine cylinder walls, and engine head components.

Additional Qualifications:

Software Abilities:

I've done coding in C, Pascal, Java, VB and PHP, Ladder Logic, and assembly. I have experience with I2C, and SPI chip-level protocols. I have 15 years of hobby experience with Linux based systems, including Ubuntu, Redhat, and Armstrong Linux. I have experience installing Linux onto an ARM-based board s such as the Raspberry Pi and Beagleboard. I have a practical knowledge of computer networking.

Western Carolina University 1999 Computer Science High School Programming Contest
3rd Place Winner (<http://www.wcu.edu/8687.asp>)

Created an Unbeatable Texas Instrument Calc, Tic-Tac-Toe Program in Nov 1998 during my 10th grade of high-school.

(Available for download at <http://www.ticalc.org/archives/files/fileinfo/71/7155.html>)

Other Work Experience:

I have a life-long history of tinkering and have built a hot-wire flow sensor as a hobby project during my sophomore year of college (see video on zacktronics.com website for this and other demonstrations).

I have installed car stereo equipment including head-units, speakers and amplifiers. I have also performed various other automotive/motorbike electrical troubleshooting. I am familiar with the concepts behind fuel injection systems and the sensors as well as some of the control loops involved.

I have experience as a laborer at a general construction company and have performed various types things such as framing, trim installation, and siding, as well as personal projects involving plumbing and wiring. I am also familiar with septic systems and have successfully replaced a drain-field in a difficult to negotiate terrain on one occasion. I have some experience using heavy machinery.