
PERSONAL PROFILE

Electrical/Electronic Engineer with 20+ years of a proven experience in electrical/electronic systems, applying knowledge of electricity and electronics in a beneficial way in the highly regulated Oil and Gas industry. Adept in carefully diagnosing and assessing issues, and offering real viable solutions. Skilled in design, prototyping, installation, upgrades and testing. Committed to working as a collaborative and positive team member, striving to utilize my knowledge and expertise for optimal engineering results. Currently working as a Lead Electrical Engineer delivering control system solutions for the oil and gas equipment department at Baker Hughes Technology. Responsible for define, review and execute the design of offshore oil platforms Topside control panels. Experienced in the full cycle of electronic/electrical design and product life cycle.

KEY ACHIEVEMENTS

- **Project nominated for the best design solution in 2021's Baker Hughes Technology Award.**
 - Design of a All-in-One Oil Well Control Cabinet. With PLCs, Power Supplies, etc. in a single 19inch 600x800mm cabinet. It was a game changer for the customer due space constraints on board of the offshore oil platform. Also, increase company's profit by around 25% due the hardware simplification.
- **Received multiple company awards in 2019, 2020 & 2021**
 - **Awards category Lead:** Support and expertise across various projects and ability to handle heavy work loads whilst maintaining quality output. Award given by direct report manager
 - **Awards category Lead:** Drove the delivery, challenged assumptions and reached sound conclusions with a very challenging customer and project. Award given by the Company site manager
 - **Award category Collaborate:** Delivery technical inputs during customer technical workshop. Then input was key at a crucial time in a very sensitive project. Award given by direct report manager
 - **Award category Collaborate:** Supporting a key equipment Electromagnetic Compatibility (EMC) testing operations, work with the equipment vendor, internal team and the test house to provide a successful conclusion which impacted multiple projects. Quickly response and support the additional testing at short notice and on a double shift program. Driving a positive impact through collaboration with multiple stake holders. Award given by the project manager
- **Company Product Champion/Subject Matter Expert (SME)/Updated old product designs**
 - Electrical Power and Communication Module (PCM) SME. Involved with all aspects of obsolescence maintenance, development of product and contribute on any product issues. An example of my role was to evaluate/implement the replacement of some external electrical connectors due its huge lead time and high price. Find a good fit-to-purpose and reliable replacement saved time and money as the proposed solution is 30% cheaper with 1/3 of the past part delivery time.
- **Developed outsourcing vendors and third parties suppliers**
 - Developed external suppliers for BoF (Bought-Out Finished) electrical control cabinet in order to reduce production costs and lead time, keeping the same product quality and reliability. Responsible for review all technical documentation, including schematics, calculations, operational manuals, test procedures, etc. Also, interface between the Project team and the third part.BoF equipment reduces the building cost by 50% and reduce the lead times from 30 weeks to 10 Weeks.
- **Successfully updated old product designs**
 - Updated old product designs due parts obsolescence in order to reduce production costs,increase product lifespan, and comply with new legislation and standards. A case of success was my work in a product updated to replace an old customized input isolation capacitor. This component had an high price and did not comply with the latest safety requirements. A more reliable and cheaper part was identified (Class Y capacitor), which increased the equipment safety and reduce the manufacturing cost. Simulations and calculation were performed to guarantee the fit-of-purpose for this new part.
- **Lead successfully various Oil & Gas equipment upgrades and design projects**

- Lead the design, installation and upgrade projects in different countries (Brazil, Australia, Singapore, UK and others) for many different customers. My last project was with a Australian Oil Company, where a full set of control system cabinets were designed, build, tested and successfully delivered. I was responsible for the electrical/mechanical design, including electrical calculations, schematics and mechanical layout design. This project was a challenge due the short delivery time and budget. But was delivered on time and about 20% below the initial budget. Received various compliments from the customer about the design quality and on time delivery. Also, received a company award in the "Lead" category.
- **Taught internal courses for technical crew and early careers engineers**
 - Taught internal courses for a technical crew as part of their technical specialization with the company. teaching subjects as electronics, electricity and equipment maintenance. All training courses evaluated with 100% of positive feedback
 - Mentoring and support graduates, early careers and apprentices. Present some technical workshops to the team as part of the company's learning-breaks scheme. Share lessons learnt, work practices and hands on experience with the apprentices and early careers in order to help build experience. I'm glad to see former apprentices and early careers become great professionals and have great feedback from their work.

EDUCATION

- **University of West of England-UWE** Bristol, UK
Machine Learning *Jan. 2020 – April. 2020*
- **Fluminense Federal University - UFF** Rio de Janeiro, Brazil
Master of Science in Computer Systems *Jan. 2013 – March. 2015*
- **Veiga de Almeida University - UVA** Rio de Janeiro, Brazil
Bachelor of Electrical/Electronic Engineering *Jan. 2003 – Dec. 2007*
- **Henrique Lage Technical School** Rio de Janeiro, Brazil
Certificate in Electronics *Jan. 1990 – Dec. 1994*

EXPERIENCE

- **General Electric Oil & Gas/Baker Hughes** Bristol, England - UK
Lead Electrical & Electronic Engineer *Feb 2019 - Present*
 - **Electrical/Electronic Hardware Design:** Work on subsea control system, electrical and electronic equipment design. Including electrical panels, power units and communication equipment. Prepare product reports, test procedures and manuals by collecting, analysing, and summarizing information and trends. Perform computer-based component, circuit, and system simulation to prove out design performance and compliance with product specifications. Produce EMC assessment and test plans documents. Perform EMC test pre-assessment and attending EMC qualification at test house. Interface with internal customers and external production / mechanical engineering teams, vendors and other stakeholders.
- **General Electric Oil & Gas** Rio de Janeiro - Brazil
Lead Control System Engineer *Aug 2010 - Feb 2019*
 - **Subsea Multiplexed Control Systems:** Technical advisor for new equipment design, redesign and new development related to electronic control systems discipline. Help the customer to increase the equipment up time and develop maintenance routines. Commissioning and maintenance of subsea equipment as BOP (Blowout Preventer). Experienced in UNIX/QNX operational system, PLCs, software troubleshooting, embedded controllers, AC Motor drivers(VFD) and electro-hydraulic system. Experience with RS232, RS485, TCP/IP and profibus communications protocols.
- **Fugro SA** Rio de Janeiro - Brazil
Technical Support Manager *Mar 2005 - Sep 2010*
 - **Geophysical Equipment:** Commissioning, Corrective and preventive maintenance of geophysics, positioning and vessel support equipment as generators, electrical / hydraulic winches, AC VFD drivers, control systems, DGPS and Survey/Seismic equipment (Side Scan Sonar, Sub bottom profiles, Multi beams, etc.) Electrical/Electronic/Controls Maintenance Workshop and offshore technical crew management. Design of electrical/electronic support devices. Fugro Academy's Engineering Instructor.
- **Subsea 7 SA** Rio de Janeiro - Brazil
Electronic Maintenance Technician *Feb 1999 - Mar 2005*

- **ROV and Oceanographic Equipment:** Responsible for Remote Operated Vehicles (ROV) and its support equipment (Video cameras, sonars, etc.,) maintenance and mobilization. Worked with Oceanographic/Hydrographic sensors (temperature, pressure, speed, etc.) maintenance, calibration and test. Developed of Oceanographic data analysis software using Delphi and Matlab.

• **Microware IT Solutions**

Rio de Janeiro - Brazil

Electronic Maintenance Technician

Apr 1995 - Mar 1998

- **IT Equipment:** Responsible for installation and Maintenance of Computers, Servers, UPS, Video Monitors, Laptops and General Software Repair.

• **Brazilian Navy**

Rio de Janeiro- Brazil

Electronic Technician Apprentice

Jan - Dec 1994

- **Radar, Sonar and Communication Systems:** Commissioning, Corrective and preventive maintenance of Radar, Sonar and Communication systems on board Submarines, Destroyers, Frigates and Aircraft Carriers.

ACADEMIC PROJECTS

- **Mux BOP Analytics:** Development of a computer method to detect Multiplex Blowout Preventer System failure using data analysis and multivariable statistics. Software developed in MySQL, R Studio and Python.
- **S.A.A.C:** Short Circuit Calculation Software for Three Phase Power Systems, using Delphi, Pascal and Matlab Languages.

LANGUAGE SKILLS

- **Portuguese:** Native
- **English:** Fluent
- **Spanish:** Intermediate

ELECTRICAL / ELECTRONIC HARDWARE SKILLS

- **Communication Protocols:** Tcpip, RS-232, RS-485, RS-422, ModBus, Profibus, CAN, LIN, I2C, SPI
- **Microcontrollers/FPGA:** PIC, Arduino, ATMEL, ARM, Altera
- **Hardware Language and Simulation:** VHDL, SPICE, LTSpice, Proteus Simulator, Qucs, SPICE, MathCAD
- **Compliances and Standards:** EMC IEC/EN 61000, IEC/EN 55022, LV Voltage Directive EN/BS 61010, Electrical Installation BS 7671, EMC Pre-Assessments

PROGRAMMING SKILLS

- **Familiar with:** R, C, Pascal, Matlab, Simulink, Octave, Mathcad, Python, MySQL, HTML, CSS, C++, JavaScript

COMPUTER SKILLS

- **Operational Systems:** MacOS, Windows, iOS, Linux, QNX
- **Document Packages:** LaTeX, MS Office, Keynote, Markdown
- **Technical Packages:** AutoCAD, AutoCAD Electrical, Eagle Schematic and PCB Layout, KiCAD Suite
- **Product Lifecycle Management (PLM):** ePims, TeamCenter

PROFESSIONAL MEMBERSHIPS

- Institution of Engineering and Technology (IET - MiET) pursuing Charteship
- Portuguese Order of Engineers (OEP)
- Brazilian Engineering Council (CREA)

HOBBIES AND INTERESTS

Due to my enduring passion for engineering, I enjoy building upon my knowledge of various computer programs that I can utilise to further my career in the industry. I also enjoy develop website, electronic prototyping, guitar related projects, 3D models design/print, play guitar and listen to my Vinyl records collection