|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | **Charlie Souza** PE, PMP, CAP, IEC61511-SFS, IEC62443-CFS   |  |  | | --- | --- | | Phone: | (713)588-0488 | | Email: | [charlie@surge.engineering](mailto:charlie@surge.engineering) | | Websites: | <https://surge.engineering>  <https://linkedin.com/in/charliesouza/>  https://charliesouza.trycoffeechats.com |   Location: Houston, Texas | | ⇨ Industrial Automation leader across multiple disciplines ranging from Electrical, IT/OT, Process Instrumentation, Control Systems, SCADA Cybersecurity (ICS), and Safety Instrumented Systems (SIS).  ⇨ Professional Engineer (PE), Project Management Professional (PMP), Certified Automation Professional (CAP), Safety Instrumented Systems (ISA84/IEC61511), Industrial Cybersecurity (ISA99/IEC62443).  ⇨ 26-year career multilingual automation professional with experience in IT/OT technologies in the energy industry. Strategic leadership of teams on projects spanning multiple continents, with $10MM budgetary responsibility. Experience in upstream, midstream, and downstream markets, brown and greenfield projects both onshore and offshore. The primary industries are Oil & Gas, Natural Gas, Natural Gas Liquids, and Biodiesel.  ⇨ Fluent in English, Spanish, Portuguese and French. | | |  | |  |  | | --- | --- | | Charlie Souza, PE, CAP, PMP, is an electrical, instrumentation, and control systems engineering consultant with more than twenty-five years of experience. Charlie’s career has taken him from engineer and project manager to team leader and consultant. He’s actively participated with ISA and IEEE for the last 15 years as a senior member, section board leader, and technical committee member. He’s a licensed Professional Engineer (PE) in the state of Texas, a Certified Automation Professional (CAP), a Project Management Professional (PMP), ISA99/IEC62443 Industrial Cybersecurity (ICS), and ISA84/IEC61511 Safety Instrumented Systems (SIS) specialist, including Fire & Gas (F&G) systems. Currently, he serves as owner and principal engineer at SURGE Engineering. Before co-founding SURGE, Charlie led teams and managed projects for different engineering companies and oil & gas producers such as BP, OXY, and Williams. He’s worked worldwide in every segment of the oil & gas and petrochemical industries as a leader of onshore and offshore (topsides and subsea) projects in the upstream, midstream, downstream, and biofuels segments. Charlie holds BS and MS degrees in Electrical and Computer Engineering from Mississippi State University. He speaks fluent English, Portuguese, Spanish, and conversational French; and has taught courses in multiple languages in the Americas, the Middle East, and Asia. He’s originally from Rio de Janeiro, Brazil, and resides with his family in Houston, Texas. |  | | |  | | --- | | **­­** |  |  |  | | --- | --- | | SURGE Engineering | Sept 2017 to Present | |   Founder & CEO, Principal Engineer  ***“From design through commissioning and start-up – including preventive maintenance programs – SURGE is an engineering and consulting firm specializing in Control Systems, Instrumentation, and Electrical Engineering of industrial applications and critical infrastructure, emphasizing Safety Instrumented Systems (SIS) and OT/SCADA Cybersecurity (ICS). Our clients are major players in the Oil & Gas, Petrochemicals, and Water & Wastewater industries.” -Charlie Souza***   |  | | --- | | **­­** |  |  |  | | --- | --- | | International Society of Automation (ISA) | Nov 2018 to Present |   Qualified Instructor, Course Developer  Qualified Instructor to ISA’s popular *Certified Automation Professional (CAP)* and *Controls Systems Engineering (CSE) Professional Engineer (PE)* exam preparation courses and the *Automation Engineering Survival Training (AEST) Bootcamp*.   |  | | --- | | **­­** |  |  |  | | --- | --- | | Hargrove Engineers + Constructors | Aug 2019 to Nov 2019 |   Controls & Automation Senior Advisor  Lead technical consultant on Controls and Automation (C+A), Instrumentation and Electrical (I+E), and Safety Instrumented Systems (SIS) projects. Implemented the Teammate Development Program, the Mentoring Program, the Online Training Library, and the Career Planning systems company-wide.   |  | | --- | | **­­** |  |  |  | | --- | --- | | Keystone Engineering Inc | Jan 2018 to Jul 2019 |   Controls & Automation Manager  Managed a team of control systems engineers responsible for the design, Gas products, and sub-products. • Supported a broad range of equipment and technologies, including Programmable Logic Controllers (PLC), Distributed Control Systems (DCS), Human Machine Interfaces (HMI), Safety Instrumented Systems (SIS), Industrial Cyber Security (ICS), and SCADA Systems, from the following manufacturers: ABB, Allen-Bradley, Emerson, GE, Iconics, InduSoft, Maple Systems, Modicon, Red Lion, SCADAPack, Schneider, Siemens, Tofino, Triconex, Wonderware, Yokogawa, and others. • Consulted on Safety Instrumented Systems (SIS) design projects, including SIL selection and verification calculations. • Consulted on Industrial/SCADA Cyber Security lifecycle projects, including design studies, penetration testing, vulnerability studies, and patching. • Consulted on Fire & Gas Detector Placement Mapping projects, including a holistic approach to determine “how many” detectors the equipment or facility needs, 3D Mapping of “where” precisely those are needed (with X, Y, Z coordinates, and Declination angles), and “why” require in that exact way (which may include Fire Modeling and Gas Dispersion Modeling, with or without Computational Fluid Dynamics).   |  | | --- | | **­­** |  |  |  | | --- | --- | | KENEXIS | Sep 2015 to Jan 2017 |   Vice President, Americas (Process Safety and Cybersecurity)  Managed Gulf Coast and emerging markets in Central and South America, with direct P&L responsibility for Industrial Cybersecurity and Process Safety. • Managed strategic accounts in the region. Leveraged oil and gas industry connections to create new accounts. (6100+ connections just on LinkedIn) • Opened company showroom and training center in Houston. Negotiated exclusivity over hosting International Society of Automation (ISA) classes in Houston. Hosted ISA and SANS classes to hundreds of attendees. • Developed a more robust marketing strategy, including a new sales-partner affiliation program in the Americas. • Signed sales partners in Brazil and Colombia. • Held strategic board-level role within ISA and active role with FBI’s InfraGard.   |  | | --- | | **­­** |  |  |  | | --- | --- | | ISA | Jul 2012 to Jun 2016 |   Vice President of Board of Directors, Chairman of Pipeline Subsection  Founded in 1945, ISA is a certification and standards organization, providing training and resources for over 36,000 members and 350,000 customers worldwide. • Vice President at the most significant ISA Chapter in the world, with over 1,300 members. • Brought in $250,000 in additional revenue through the scholarship program. • Developed Summer Bootcamp Series training program; ongoing impact for hundreds of students annually.   |  | | --- | | **­­** |  |  |  | | --- | --- | | BP | Aug 2012 to Sep 2015 |   Project Manager (Onshore and Offshore Crude Oil, Natural Gas, and NGL Pipelines)  Managed nationwide team of 8-10 project discipline engineers, including Operations, Electrical, HSSE, Permitting, Automation, and Controls, on 5 of the group’s 10 offshore projects in the Gulf of Mexico. • Saved over $4MM through a partnership with Procurement and Supply Chain (PSCM). Created case study showcasing best practices in the fieldwork bid process. Created a how-to guide on reducing project budgets. • Maintained perfect Health, Safety, Security & Environmental (HSSE) score. Zero Days Away from Work policy and implementation recognized by leadership team for OSHA compliance. • Maintained and managed concurrent schedules, responsible for communication through BP leadership as well as team members. Balanced logistics requirements while managing multiple joint-venture partners.   |  | | --- | | **­­** |  |  |  | | --- | --- | | BP | Sep 2012 to Aug 2015 |   Diversity & Inclusion Team Lead  Appointed to the leadership role for Diversity and Inclusion, impacting over 500 employees across four US states. Supervised team of 10 to implement and deliver annual Diversity and Inclusion plan to multiple field locations. • Recognized by BP America’s Vice President as the top fundraiser for the Annual Bowl-A-Thon; a top award for recruiting fundraising teams within the organization. • Collaborated with over 600 members: key team role within BP Energia (BP’s Latino Business Resource Group). A core team member, Global Reach USA (BP’s International Business Resource Group) and BP Pride (BP’s LBGT Business Resource Group) • Hosted various Career Development events, Mentoring, and Career Advancement initiatives, impacting thousands of employees at all levels within the company.   |  | | --- | | **­­** |  |  |  | | --- | --- | | SGCE | May 2011 to Aug 2012 |   Principal Control Systems Engineer (Biofuels)  Private-equity-backed technology company; hired by a team of former Exxon executives to launch clean fuels refining company, known for XTLH© plants. Work included Coal-to-Liquids (CTL), Gas-to-Liquids (GTL), and Biomass-to-Liquids (BTL) manufacturing solutions. • Selected Main Automation Contractor (MAC) on a $1.6B project. • Developed Operator and Control Systems Development Trainings on Yokogawa DCS (CENTUM VP) and SIS (ProSafe RS) Systems. • Wrote the overall control philosophy for the Coal-to-Liquids Fischer-Tropsch (FT) Project • Managed and supported feasibility studies for licensors, joint-venture partners, logistics, process safety, and risk identification through Front End Engineering Design (FEED), including FEL1/2/3 gates to satisfy P80 project status.   |  | | --- | | **­­** |  |  |  | | --- | --- | | OXY | Nov 2007 to May 2011 |   Project Engineer (Crude Oil Pipelines)  Managed instrumentation, electrical, and automation control projects within Oxy Pipeline Subsidiaries. • Delivered $6MM in multiple small upgrade projects, executing concurrently. • Directed crews of approximately 100 workers as a leader on pipeline construction of brownfield and greenfield sites. • Negotiated vendor contracts that resulted in cost savings above $500K across multiple projects; reduced the overall budget by 10% through effective negotiation on key Master Service Agreements (MSA).   |  | | --- | | **­­** |  |  |  | | --- | --- | | OXY | Apr 2004 to Nov 2007 |   Automation Systems Consultant (Oil & Gas Exploration and Production)  HMI and SCADA systems expert. Implemented and deployed systems around the globe. • Expertise in OPC (OLE for Process Control), Wonderware, Iconics, Modbus, SCADAPack, and GE FANUC. • Trained hundreds of multi-cultural engineers worldwide; delivered training in both English and Spanish. • Recognized for Best Automation Project with Lufkin Injection Well Controller Interface application. • Devised innovative HMI interface that allowed clients to customize the HMI dashboard and access information in new and more effective ways.   |  | | --- | | **­­** |  |  |  | | --- | --- | | Williams | Aug 2001 to Mar 2004 |   Automation Engineer (Natural Gas Pipelines)  Designed, deployed, and supported HMI/SCADA systems nationwide. • Scripted in multiple programming languages (C, C++, VB, VBA, VBScript, JavaScript). • Held active role in commissioning of small and large natural-gas Compressor Stations with Gas Turbines. • Expertise in Wonderware, Allen Bradley, DH+, SIEMENS, and Windows Server systems.   |  | | --- | | **­­** |  |  |  | | --- | --- | | Mississippi State | Aug 1999 to May 2001 |   Teaching Assistant at Bagley College of Engineering  • Set educational programs for multiple electrical and computer labs. • Mentored teams of students designing and implementing final class projects. • Taught hundreds of undergraduate electrical engineering senior-level students.   |  | | --- | | **­­** |  |  |  | | --- | --- | | Toshiba America | Jan 1995 to Aug 1999 |   Technical Support Engineer and Team Leader  Managed team of 3 direct reports, providing sales engineering support as laptop and mobility specialist at the top reseller in Rio de Janeiro. • Aided organization in achieving 90% market share in the local area. • Portable computing solutions and mobility for the government, commercial accounts, and the energy industry. | | | **Bio** | |  | | **Experience** | |  | |  |  | | --- | --- | | Mississippi State University | 1999 to 2001 |   Master’s Degree, Electrical and Computer Engineering  VLSI (Very-Large-Scale Integration), FPGA, Machine Coding and Digital Design (VHDL Coding)   |  | | --- | | **­­** |  |  |  | | --- | --- | | University of Houston | 2008 to 2010 |   Master’s Degree, Petroleum Engineering (Subsea Engineering)  Drilling (including WellCap Well Control Certificate), SPE Drilling Symposium, Pipe Telemetry Conference (NOV IntelliServ Manufacturing Facility, Utah), Formation Evaluation (including Coring Techniques and Core Analysis), and Petroleum Economics.   |  | | --- | | **­­** |  |  |  | | --- | --- | | Centro Universitário da Cidade do Rio de Janeiro (UniverCidade) | 1991 to 1997 |   Bachelor’s Degree, Electrical and Electronics Engineering  Controls Systems, Telemetry, Cellular Telecommunications, Microprocessors, Database Programming, Basic, Cobol, Pascal, and C programming languages. Rio de Janeiro, Brazil. | | | **Education** | |  | Leadership, Project Management, Management, Energy Industry, Oil & Gas Industry, International Project Management, Non-profit Volunteering, Project Engineering, Instrumentation, Petroleum, Gas, Commissioning, Engineering, Automation, Process Engineering, Onshore, FEED, Process Control, Control Systems Design, Oil/Gas, Petrochemical, Electrical Engineering, Root Cause Analysis, Project Planning, EPC, Power Generation, DCS, Refinery, Subsea Engineering, SCADA, PLC, SIS, Safety Instrumented Systems, F&G, Fire & Gas Systems Performance Design, Business Networking, Team Motivation, Cultural Awareness, Fundraising, Training, English, Spanish, Portuguese, Multi-cultural team building, Coaching & Mentoring, Diversity Champion, Control Theory, Modbus, Wonderware, Iconics, Triconex, Yokogawa, Allen-Bradley, ABB, and many others. | | | **Skills** | |  | |  |  | | --- | --- | | English (Native or bilingual proficiency) |  |   Portuguese (Native or bilingual proficiency)   |  |  | | --- | --- | | Spanish (Full professional proficiency) |  |   French (Limited working proficiency)   |  | | --- | | **­**  **­** | | | | **Languages** | |  | |  |  | | --- | --- | | Certified Automation Professional (CAP) | Jul 2012 |   The International Society of Automation (ISA)   |  | | --- | | **­­** |  |  |  | | --- | --- | | Professional Engineer (PE) | Dec 2012 |   The Texas Board of Professional Engineers (TBPE)   |  | | --- | | **­­** |  |  |  | | --- | --- | | Project Management Professional (PMP) | Oct 2013 |   The Project Management Institute (PMI)   |  | | --- | | **­­** |  |  |  | | --- | --- | | Safety Instrumented Systems (SIS) Specialist (ISA84/IEC61511 SFS) | Jun 2015 |   The International Society of Automation (ISA)   |  | | --- | | **­­** |  |  |  | | --- | --- | | Cybersecurity Professional  (ISA99/IEC62443 CFS) | Dec 2015 |   The International Society of Automation (ISA)   |  | | --- | | **­­** |  |  |  | | --- | --- | | Qualified Instructor and Facilitator | Nov 2018 |   The International Society of Automation (ISA) | | | **Certifications** | |