

SARA JOHARI

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Summary

Mechanical Engineer with a strong background in project management, infrastructure development, and electromechanical systems. Currently excelling as a Staff Professional I at Kleinfelder, managing projects totaling ~\$50MM across 14 projects for 9 major utility companies. Proven track record as a Project Engineer at BMC, Inc., overseeing ground-up developments valued up to \$15MM within strict budget and schedule constraints. Proficient in site assessments, MAOP validation, and AutoCAD-based pipeline design. Beyond professional infrastructure work, I maintain a deep passion for mechatronics, continuing to develop my skills in automation and electromechanical design as a personal pursuit.

Professional Experience

Staff Professional I

August 2022 - Current

Gas Transmission System Inc., a Kleinfelder Company

- **Team Leadership & QC Management:** Led and trained a specialized engineering team in performing quality checks (QC) for DTE Op Diagram and Health Score submittals; managed the end-to-end submittal process to ensure 100% alignment with current updated standards.
- **Workflow Optimization & Scaling:** Developed standardized symbols and presets for DTE Op Diagram workflows to optimize efficiency, subsequently scaling the tool team-wide to increase collective productivity and achieve a 67% reduction in average completion time.
- **Infrastructure Design:** Collaborated with major utility clients (PG&E, SDG&E, SMUD, NiSource, etc.) to design and reconstruct natural gas and electrical infrastructure.
- **Large-Scale Engineering:** Designed 100,000+ feet of piping and executed 1,000+ tie-ins; engineered meter replacements for 5,000+ gas services to improve system reliability and minimize delays.
- **Compliance & Risk Mitigation:** Performed MAOP validation and structural risk modeling per CFR 192.917; Maintained a rigid testing and documentation mindset directly transferable to the aerospace environmental standards like DO-160G.
- **AI Implementation:** Optimized a Microsoft Azure-based AI tool (DIP) to process 16 documents per second, significantly enhancing the accuracy and speed of data extraction.

Project Engineer

August 2021 - August 2022

Broadway Mechanical Contractors, Inc

- **Project Management:** Delivered four ground-up residential and hotel developments valued up to \$15MM by managing project lifecycles from planning through execution to ensure on-time and under-budget completion.
- **Design Coordination:** Optimized project planning for design-build and bid-spec projects by developing accurate engineering cost estimates and supervising cross-functional teams to maintain design integrity.
- **Financial & Change Order Controls:** Negotiated change orders and performed rigorous invoice validation for a \$15MM portfolio, maintaining strict budget adherence through comprehensive management of schedules of values.
- **Procurement & Vendor Management:** Ensured 100% material availability for complex mechanical systems by performing strategic vendor management and reviewing sub-trade quotations against technical specifications.
- **Stakeholder Communication:** Facilitated high-level alignment by preparing weekly status reports and submittal packages to mitigate risks impacting client relations and project timelines.
- **Risk Mitigation & Emergency Response:** Spearheaded the recovery of a \$5MM development during a critical flood event and project-manager absence by establishing a real-time stakeholder communication network and performing an immediate throughput and safety qualification of on-site equipment to identify damages, reorder long-lead materials, and prevent a major schedule slip.

Control Systems Engineer Intern

2020 - 2021

Personal Hygiene Instant Liquid Dispenser (PHILD), CSU Chico

- **Electromechanical Design:** Designed and manufactured low voltage electromechanical systems and the control system components for a sustainable vending machine project.
- **Systems Integration & Stress Analysis:** Performed structural sizing and basic stress analysis on electromechanical component mounts; Developed expertise in electromechanical troubleshooting by integrating a Closed-Loop system with stepper drivers, relays, and sensors.
- **PLC Programming:** Designed and built modular PLC systems and developed software to optimize automated processes.
- **Data Validation:** Formulated automated testing tools and executed Design of Experiments (DOE) to validate complex electromechanical systems; analyzed multi-variable sensor data to optimize system performance and reliability
- **Rapid Prototyping & DFA/DMA:** Applied DFM/DFA principles and tolerance analysis to the design and 3D printing of component replacements, optimizing parts for scalable manufacturing and reducing overall production costs.

Education

Bachelor of Science, Mechanical Engineering

May 2021

Bachelor of Science, Mechatronics Engineering, Minor in Computer Science

May 2021

California State University, Chico

Skills

Equipment : Oscilloscope, Digital Multimeter, FTIR, SEM, XDR, Raman Spectroscopy, EDS

Electronics : Arduino, Modular PLC, Stepper Motors, ADCs & DACs, Op-Amps, BJTs, EEPROM

Programming : C++, Java, Python, Verilog, Assembly, MATLAB, Simulink, G

Software Tools : AutoCAD, Solidworks (Parametric Modeling, Assemblies, & FEA/Simulation), Keil MDK, NI LabVIEW, Scopy, Bluebeam, GIS

Management Software : Viewpoint, Raken, BIM360, Procore