

Zain Shah

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Personal Profile

Mechanical Design Engineer with a track record of delivering high-performance designs within the food industry. Certified in SOLIDWORKS (Professional) with a strong command of advanced CAD software, including ANSYS and CREO. Proficient in applying engineering principles to ensure manufacturability, structural integrity, and compliance with hygienic design standards. Demonstrated ability to manage projects through all phases, from initial concept to installation, while optimising designs for efficiency and cost-effectiveness.

Key Skills

- **Proficient in Computer-Aided Design (CAD):** software such as ANSYS, SOLIDWORKS, and Creo, with the ability to create detailed 3D models of mechanical components and assemblies. Experienced in utilizing advanced features and tools within these software to optimize designs for manufacturing, perform simulations, and validate design integrity.
- **Utilizing Finite Element Analysis (FEA) software:** such as ANSYS, to analyze the structural integrity, performance, and behavior of mechanical systems under varying loads and environmental conditions. Skilled in creating accurate finite element models, conducting simulations, interpreting results, and making design recommendations based on the analysis.
- **Materials science and engineering principles:** experienced in evaluating material properties and their suitability for specific applications, considering factors such as strength, durability, corrosion resistance, and cost-effectiveness.
- **Excellent communication and collaboration abilities:** with proficiency in conveying technical concepts effectively through written reports, presentations, and visual aids. Skilled in working collaboratively in multidisciplinary teams, actively listening, and fostering a positive team environment to achieve shared goals.
- **Strong project management skill:** including planning, organizing, and executing engineering projects with a focus on achieving objectives, managing resources effectively, and ensuring timely completion. Experienced in applying project management methodologies and maintaining clear communication with stakeholders throughout the project lifecycle.

Education

De Montfort University, Leicester, England - (Oct 2020 – Oct 2022)

Mechanical Engineering (BEng) (2.1)

University Technical College (GPUTC), Peterborough, England - (Sep 2018 - July 2020)

A-level: Engineering (**Distinction**), Maths (**B**), and Business (**B**)

Professional Experience

S4 Engineering – Mechanical Design Engineer – (Jan 2023 – present)

- **Project Lifecycle Management:** Oversaw projects from sales handover through design, fabrication, and on-site installation, ensuring delivery within technical specifications and deadlines.
- **Design for Manufacturability:** Developed stainless steel component designs optimised for fabrication and hygienic applications within the food industry.
- **Major Design Achievements:** Designed a structural platform to support two 5,000L vessels, ensuring stability and maintainability. Engineered a two-storey operator access platform, improving safety and operational efficiency. Developed a 7m cat ladder to provide secure access to a tank bund, meeting strict safety requirements.
- **Professional Development:** Achieved SOLIDWORKS Professional Certification and currently progressing toward Expert Certification to broaden my technical expertise.
- **Site Surveys & Safety Compliance:** Conducted detailed surveys to inform accurate designs and produced Risk Assessments and Method Statements (RAMS) to support safe project execution.
- **AutoCAD and P&ID Design:** Experienced in creating piping and instrumentation diagrams (P&IDs), pipework flowcharts, and instrumentation schematics for mechanical and process systems.

Public Health England (SITEU) – NHS Call Handler – (July 2021 – Sep 2021)

- **Clear and effective communication:** Deviated from scripted responses when necessary to provide personalized and appropriate information. Handled customer complaints and escalations with professionalism, ensuring a positive resolution and maintaining customer satisfaction.
- **Continuous learning and improvement:** Stayed updated on the latest healthcare guidelines, policies, and procedures to provide accurate and up-to-date information to callers.
- **Providing advice and information:** Effectively and empathetically communicate with callers to understand their inquiries or concerns. Provide accurate and relevant information, guidance, and advice related to COVID-19 guidelines.

References available upon request