PROTOTYPING LEAD/DESIGN ENGINEER

Professional Summary

- Highly proficient in 2D (AutoCAD) Technical Drafting, Engineering design, 3D Parametric Modeling (SolidWorks)
- Manufacturing: Additive Manufacturing, 3D printing prototyping, GD&T, Design Drawings
- Programs: Proficient with Microsoft Office Suite, Access, Math-CAD, MATLAB, and Basic programming with Python and C/C++
- Reliability: Risk Base Inspection (RBI), Mechanical Integrity Analysis, Process Data Analysis, Equipment Inspection Drawings
- Blue-Prints: Drafting/Reading Design, Construction, Isometrics, Piping Instrumentation, Inspection, and Process Fluid Drawings

Skills

- 3D
- 3D design
- AutoCAD
- Basic programming
- Budget
- C
- C++
- CAD
- CPI
- Client
- Data Analysis
- Drafting
- Focus
- Functional
- Math-CAD
- MATLAB
- Mechanical
- Meetings
- Access
- Excel
- Microsoft Office Suite
- Modeling
- Organizational
- Project leader
- Prototyping
- Python
- Quality
- Reading
- Research
- SolidWorks
- Utilities

Work History

Prototyping Lead/Design Engineer , 11/2017 to 12/2021
Annapolis Junction , MD

- Executed engineering design process to design creative solutions and meet client expectations.
- Manufactured dozens of 3D printed iterations prototypes using SolidWorks and 3D parametric modeling.
- Draft / Designed CAD blueprints for 2D / 3D models following ASME Y14.5 guidelines, and GD&T.
- Defined problems and budget constraints, research, test, iterate prototypes and improve technical design parameters.
- Utilized design for additive manufacturing process to create reliable and accurate prototypes.

Project Engineer , 01/2019 to Current
Lend Lease Group â€“ Fort Hood , TX

- Prepares and reviews engineering specs, scope of work, schedule of milestones, and CPI (cost performance index) and SPI (Schedule performance index) to track project success for up to 3 projects quarterly.
- Uses Excel and Access to validate data by conducting meetings with client subject matter experts and cross-functional teams.
- Utilizes AutoCAD to modify piping instrumentation drawings (P&ID), fixed equipment inspection drawings (EID), and isometrics to design new visual inspection points and focus areas.
- Analyzes piping, heat exchangers, distillation columns, vessels, separators, and reactors to assign corrosion types and possible damage mechanisms for RBI by analyzing geometric design parameters.
- Successfully implements qualitative piping inspection projects for one of the largest refineries in the US for a sulfur recovery unit, sour water stripper, utilities, and relief plants increasing reliability and lowering operational costs by 3-5%.
- Contributed to launch of a 4-year pilot project in 2021 to implement a full risk-based inspection program (RBI) creating new CAD and Excel tools to increase efficiency and quality.

Assistant Project Manager , 08/2014 to 11/2017
Kbr â€“ Manassas , VA

- Participated in all stages of design for commercial and residential construction projects using AutoCAD and Sketch UP software in the field

to accurately measure, modify, and designs construction blueprints.
- Collaborated with architects, contractors, and engineers to coordinate and design construction details using AutoCAD technical drafting skills to communicate technical design, BOM, and permitting guidelines.
- Successfully completed municipal permitting requirements for civil engineering utilities, MEP, residential, and commercial projects.

mechanical engineer

- Project leader materializing innovative ideas into detailed design plans and solutions.
- Skilled at creating plans for operational execution in demanding cross functional and cross organizational environments.
- Looking to join an organization where design and project engineering skills can be leveraged along with my 2D/3D design and parametric modeling experience.

Education
Bachelor of Science : Mechanical Engineering Conferred , 2018
UNIVERSITY OF TEXAS AT TYLER - State
Associate Degree : Engineering Science Conferred , 2015
HOUSTON COMMUNITY COLLEGE - City , State
Work History
mechanical engineer ,

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Project Engineer , 01/2019 to Current
NA â€“ City , STATE

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Company Name â€“ City , State

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Accomplishments

- 2021- NASA competition -Watts on the Moon Challenge Phase 1.
- Participated in NASA centennial challenges competition to design a solution to supply power to a lunar rover on the mission to collect and carry regolith to a processing water extraction plant in a lunar crater.
- Use AutoCAD, Math-CAD, and Excel to precisely plan and graph battery cycles with extreme environmental conditions and technical challenges to complete mission tasks.

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- BBlue-Prints: Drafting/Reading Design, Construction, Isometrics, Piping Instrumentation, Inspection, and Process Fluid Drawings,
- 3D, 3D design, AutoCAD, Basic programming, budget, C, C++, CAD, CPI, client, Data Analysis, Drafting, focus, functional, Math-CAD, MATLAB, Mechanical, meetings, Access, Excel, Microsoft Office Suite, Modeling, organizational, project leader, prototyping, Python, quality, Reading, research, SolidWorks, utilities