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RAGHUVAMSHI C L

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Areas of expertise include:

- Product Development
- Crash Testing
- 3D CAD Modeling
- Mechanical Design
- DFM & DFA
- GD&T
- Linear & Non-linear FEA
- SolidWorks

WORK EXPERIENCE

Mechanical Engineering Intern **MirraViz, CA, USA** **12/2019 - 3/2020**

- Finalized design parameters for angular metal deposition (Sputter & Vapor deposition) on facets utilizing subroutines in Excel and MATLAB. Recommended baffle angle (42 degree), baffle pitch (37 mm), and baffle length (30 mm)
- Designed plastic and metal parts (injection molding, sheet metal, CNC, MIM) using DFM and DFA from ideation to production using PTC CREO. Worked with local and overseas vendors to set up lab for opto-mechanical testing
- Leveraged product design engineer skills attained ratio's up to 10 folds of metal deposition between two facets with highest efficiency of 53% with baffles. Validated results in ANSYS-Fluent tool

Mechanical Engineering Intern **CertaSIM, LLC, CA, USA** **06/2019 - 12/2019**

- Developed single element models using explicit non-linear finite element (FE) modeling to examine material properties under quasi static punch shear loading
- Provided specific and timely feedback to every member of the team by having design review meetings & status reports
- Developed inverse material modeling of S2-glass, a composite material, based on experimental published data from University of Delaware. Gained in-depth knowledge of mathematical constitutive model
- Analyzed rate dependent progressive damage and delamination according to specification in composites under ballistic loading. Validated material model parameters by attaining results 91.5% in confidence with experimental values

Teaching Assistant **San Jose State University, CA, USA** **08/2018 - 05/2019**

- Taught '**SolidWorks**' and '**AutoCAD'** for a class of 50 students, proctored examinations, reviewed student performances, and prioritized work environment by maintaining all resources students needed

Mechanical Engineer **Saint-Gobain (SG)** **07/2014 - 10/2016**

- Applied Lean Manufacturing techniques, PFMEA and DFM to diminish defects, improve quality and cut down material cost. Employed documented data to improve productivity by 8%
- Developed initial concept design based on basic design requirements. Responsible for mechanical drawing generation, sourcing, implementation and manufacturing support throughout product lifecycle
- Developed a test rig for SG R&D, created 3D CAD models and 2D part drawings (SolidWorks) utilizing ASME GD&T standards. Applied finite element analysis skills (ANSYS) to reduce vibrations in peel arm
- Performed root cause analysis & FMEA analysis for drop in yield using DOE. Parameters, adhesive thickness, film thickness, temperature and material were assessed
- Worked closely with R&D, contract manufacturers and vendors (global and local) to monitor assembly line. Worked on both short terms and long terms solutions. Made changes in coating process and manufacturing line
- Worked closely with vendors to design, deploy and certify SG products at OEM's (TATA, HONDA, TOYOTA etc.). Collaborated with cross-functional managers and engineers to meet function
- Handled design, analysis and assembly of long-term test hardware to validate product life cycle. Experienced in, in-house prototyping, 3D printing, FMEA, DOE, SPC, GD&T and DFMA

Mechanical Engineer **Saint-Gobain (SG)** **07/2013 - 07/2014**

- Used DFM (Design for Manufacturing) & DFA (Design for Assembly) concepts to ensure low manufacturing cost and simple assembly process for the product. Conducted accelerated life testing on different components to check reliability
- Strategized a technical sales tool with help of SG R&D and global counterparts. Conducted data driven research

Academic Projects

Graduate project on 'Drop Test Simulation of Cell Phone Using IMPETUS Afea Slover', SJSU **1/2019 – 1/2020**

- Performed a drop test to determine structural integrity of a cellphone under impact loading using **non-linear explicit FEA solver (IMPETUS Afea)**. Conduct parametric study on material properties.
- **SolidWorks and ANSYS (SpaceClaim)** are used to design and preprocess the model

Academic project on 'Flexure Strength of a 3D Printed Beam Using SPC & DOE technique', SJSU **08/2018 - 12/2018**

- Conducted research and optimized Flexural strength of a bean by varying printing factors. Results within a 95% confidence interval revealed, orientation has most impact on flexural strength with an 81.5Mpa fit

Academic project on 'Design of Mirror and Flexure assembly for Optomechanical System', SJSU **01/2018 - 05/2018**

- Engineering drawings and engineering principles are used to design a flexure mechanism for 'Optomechanical System', solid modeling software 'SolidWorks' was utilized. FEA tool ANSYS was utilized to run simulations

Education

Master's of Science in Mechanical Engineering, San Jose State University, San Jose, CA **05/2020**
Bachelor's in Mechanical Engineering, People's Education Society University, Bangalore, India **07/2014**

Technical Skills

- ANSYS
- SolidWorks
- SPC & DOE
- CREO
- Prototyping
- MATLAB & Simulink
- CATIA
- Additive Manufacturing