Parin Rau

Mechanical Engineer

Daly City, CA

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Experience

Mechanical Design Engineer

Momentus Space, San Jose, CA May 2022 – Feb 2023

- Collaborated with team of R&D engineers to develop and build brand new roll-out solar array product to achieve cost-savings and provide potential for millions in additional revenue
- Prototyped critical subsystem with machine shop & 3D-printing, identified functional test requirements, then rapidly iterated on design based on test results to deliver finalized design within limited schedule
- Executed test plans to qualify solar array for vibration and thermal environments
- Developed tools & test fixtures to improve manufacturability and demonstrate functionality of complex subsystems
- Generated procedures and maintain documentation to implement lessons learned and build-up knowledge base

Mechanical Design Engineer

Maxar Technologies, Palo Alto, CA Jan 2020 – May 2022

- Responsible design engineer for 4 existing deployable mechanism product lines across 15 satellite programs
- Collaborated with cross-functional teams of engineering, production, project managers, and supply chain to ensure hardware meets design, cost, and schedule requirements
- Interfaced with customers at design reviews acting as the subject matter expert for my product lines
- Modeled complex mechanical assemblies, generated BOMs, and released 50+ component and assembly drawings using Creo/Pro-E CAD and Teamcenter PLM software
- GD&T and assembly tolerance analysis implemented to improve manufacturing lead times and providing corrective actions to reduce hardware non-conformances
- Collaborated with production team to develop and execute hardware testing plans, troubleshoot testing issues, schedule production, and implement manufacturability improvements into designs
- Redesigned multiple mission-critical products for mass-optimization and qualified products for vibration, thermal, and shock environments

Mechanical Design Engineer

Oneloop, UC Davis Hyperloop Design Team Oct 2017 - Jul 2019

- Used Solidworks to design and manufacture sheet metal fuselage to maximize internal volume, minimize drag, and allow easy access to internals for servicing
- Designed, manufactured, and validated low-speed electric drivetrain subsystem to taxi vehicle under its own power while maintaining compact mechanical and electrical footprint
- Developed and executed functional tests to validate performance of magnetic braking system

Projects

Full-Stack Software Engineer

Project Management App Aug 2023 - Jan 2024

- Built full-stack web app with for managing and tracking progress on other personal projects, similar to Jira
- React and Typescript front-end, Node.js and MongoDB (No-SQL) back-end
- CRUD functionality via REST API with user permissions using JSON web tokens
- Git and Github used for version control

Skills

- **Mechanical Design**: Creo/ProE, Solidworks, Onshape, Teamcenter, PDM, Hand-Calc Validation, DFx (DFA/DFM)
- **Software Developmen**t: Javascript/Typescript, React JS, SQL, MATLAB, Python, C++, Git/Github

Education

BS with Honors in Mechanical Engineering
University of California, Davis, 2015-2019
GPA: 3.76/4.00, Tau Beta Pi honor society member