Vikas Budda

Mechanical Design Engineer | Siemens NX (UG NX) | PMI / MBD
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Profile Summary

Mechanical Design Engineer with 3+ years of experience in component design, building 1:1 scale parametric part and assembly models in Siemens NX (UG NX), creating and managing Product Manufacturing Information (PMI) for Model-Based Definition (MBD), and preparing manufacturing drawings with GD&T. Experienced in BOM management, engineering change (ECR/ECN) and PLM data control across Teamcenter, Enovia SmarTeam and 3DEXPERIENCE.

Technical Skills

CAD (Primary): Siemens NX / UG NX – parametric part modelling, assembly modelling, drafting, PMI
Other CAD: SolidWorks, CATIA V5 (Part Design, Generative Sheet Metal), AutoCAD, Blender
MBD & Drawings: PMI annotation, Model-Based Definition, GD&T (ASME Y14.5), manufacturing drawings / TPD
PLM & BOM: Teamcenter, Enovia SmarTeam, 3DEXPERIENCE, BOM / DiaBOM, ECR & ECN, revision control
Manufacturing & Analysis: DFM, 3D Printing (Bambu Lab A1), ANSYS (Structural), SPM concept design
Automation & Office: NX macros, CATIA VBA macros, Excel VBA, MS Word, Excel, PowerPoint, Outlook

Professional Experience

Source Engineering Services and Technology **Dec 2025 – Present**
Mechanical Engineer *Bengaluru*

- Created **1:1 scale parametric 3D part models and assemblies in Siemens NX (UG NX)**, maintaining design intent and compliance with customer specifications.
- Created and managed **Product Manufacturing Information (PMI)** in Siemens NX (3D dimensions, GD&T, datums, surface finish and notes) to support **Model-Based Definition (MBD)** workflows.
- Prepared **manufacturing drawings** (Technical Product Documentation) with complete dimensioning, tolerancing, GD&T, BOM tables and annotations, released for manufacturing.
- Remastered customer-supplied STEP geometry into fully parametric native NX models and built complete top-level **parametric assemblies** with proper constraints.
- Handled **BOM / DiaBOM** creation and updates, **ECRs and ECNs**, ensuring revision control and traceability across design changes.
- Owned concept-to-layout design of a Special Purpose Machine (SPM) in SolidWorks, selecting bought-out standard components and modelling all custom parts.

Taal Tech **Jun 2023 – Sep 2025**
Design Engineer *Bengaluru*

- Designed and modified aircraft interior components in CATIA V5 and SolidWorks, ensuring design integrity through fit checks and adherence to FAA certification standards.
- Created and modified sheet metal and machined components using Part Design and Generative Sheet Metal workbenches.
- Prepared accurate **manufacturing and assembly drawings with GD&T** for production.
- Managed part data, revisions and configuration across the project lifecycle using **Enovia SmarTeam (PDM)**.
- Authored and reviewed Material Test Reports, Seat/Divan Material Reports, Additive Manufacturing Substantiation Reports and Fire Containment Analysis to meet FAA flammability requirements.
- Automated documentation workflows with **Excel VBA**, cutting manual processing time by **30%**.

Projects

Hydration Puck – Smart Hydration Tracker | *Siemens NX, 3D Printing, Electronics* **Sep 2025 – Oct 2025**

- Designed a compact enclosure in Siemens NX for precise fit, compactness and manufacturability (DFM).
- Procured, wired and soldered electronics; integrated sensor and display modules into the enclosure.
- Built multiple 3D-printed prototypes to validate assembly tolerances, ergonomics and aesthetics.

Education

Nadimpalli Satyanarayana Raju Institute of Technology **2020 – 2023**
B.Tech, Mechanical Engineering – CGPA: 7.08 *Visakhapatnam, AP*

Sai Ganapathi Polytechnic College **2017 – 2020**
Diploma in Mechanical Engineering – CGPA: 8.5 *Visakhapatnam, AP*

Certifications

- Certified SolidWorks Associate (CSWA) – Dassault Systèmes, Nov 2025
- SolidWorks – Guvi, Nov 2025 | Python Essentials – Cisco Networking Academy, Dec 2023
- AutoCAD – IGIAT, May 2017