



Madhan Kumar

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Professional working as a mechanical design engineer with more than 8+ years of experience in Semiconductor industries projects, Product Design, and pump and motor currently learning data science and automation and project leadership.

Experience

Senior Consultant

08/2022 to 04/2023

Capgemini Technologies Limited, Bengaluru, KA, INDIA

Project description: Locomotive Manufacturers-Design and make ECN for ECR, updates drawings and models, and make manufacturing assembly. Engineering Change Management (ECM) like ECO, ECR, and MCO creation.

CAD Tools: UG/NX with Team Center, Sheetmetal design, Heavy Machinery Design.

Consultant

04/2017 to 05/2022

Capgemini Technologies Limited, Coimbatore, TN, INDIA

• Creo 7.0, NX 11, AutoCAD, SolidWorks, Team center and Agile PLM

• VBA, Python, Matlab,

Roles & Responsibilities:

• Design Support, PMI, and PLM activities to semiconductors - GAS BOX and CHEM. other Subassemblies.

• Mechanical routing and Gas line systems like weldment routing, Pipe, and cable routings.

• Prepare using 2D and 3D CAD software mechanical drawings, detailed drawings, and assembly models complete with calculated dimensions.

• Revise and alter detailed and layout drawings to conform to engineering changes.

• Developing Assemblies, creating a bill of materials, M&I (Machining and Inspection), Assembly and manufacturing drawing creation, and selection of OEM components.

• Gas BOX - Sheet Metal Enclosure Design.

• Assembly BOM comparison, Engineering Instruction and Rework Instruction for GAS BOX.

• Engineering Change Management (ECM) like ECO, ECR, and MCO creation.

• PMI - SOE Creation, 3DPDF Creation, Operational Method Sheet (OMS) Creation for ASML and LAM projects.

• To respond to the Supplier Problem Sheet (SPS) with the correct solution for the manufacturing issues.

• Preparing the team reports weekly and monthly.

• Optimize designs to address Reliability Costs, to design for Manufacturing/Assembly (DFM/DFA).

• Design automation making 3D models using my Python programming

• Excel VBA for making excel workout

6+ years PLM and ERP: Oracle agile PLM and ERP

CAD Tools: Cero and Solid works and auto cad UG/NX with Team Center, Heavy Machinery, Jig and Fixture and Agile PLM and Kaizen making and Layout making and lean and six sigma.

Design and draftsman

10/2014 to 11/2016

Texmo industries, CBE, TN, INDIA

• Foundry engineering design and drafting pattern and core box Drawings and document Controlled Works

• CFD analyses in MAGMA software for melt flow analysis

• Updating workshop and plant layout and work flow.

• Rapid proto typing in 3d printer and 3d scanning.

• Making Kaizen and design automation using VBA

• Vendor following and Main ISO documents

CAD Tools: Solid works and auto cad, Heavy Machinery, Jig and Fixture. CFD simulation (FEA) (Magma 5.3 2016) Kaizen making and Layout making and lean and six sigma.

Language:

Tamil, English (professional),

Chinese (beginner now)

Top Skills

- CAD & 3D Modeling
- Data analysis for finding new improvements
- Creative and Development
- Project Management
- Automation Skills
- Customer support and Document support

Personal Attributes

- Time management
- Hard-working
- Creativity
- Confidence

Education and certifications

- Google Project Manager Certificate, Coursera, 2022.
- Python for Everybody Specialization Certificate, Coursera, 2022.
- IBM Data Analyst Specialization Certificate, Coursera, 2022.
- Google Data Analytics Specialization Certificate, Coursera, 2022.
- Diploma in Mechanical engineering – 2014, Christ the king polytechnic college, CBE, TN, INDIA.

Documentation Work Exposure:

MS-OFFICE, Google spreadsheet, advance excel with VBA.

Mechanical Design tools:

Creo (6+ years), NX Cad with Teamcenter (2+ years), AutoCAD, SolidWorks with ePDM (8+ years) and Agile PLM Magma5.3 (CFD) 2+, Oracle ERP.

Data Analysis Tools Exposure:

Pythons, R Programming, Tableau, power BI

Environment Knowledge:

5s and kaizen and 6 sigma and lean manufacturing.

Hackathon Project:

Smart Grocery container (IOT Projects)

Other tools basic:

Adobe products (photoshop, illustrator & InDesign) and Simulation, Manufacturing (CAM), Autodesk products (Autodesk Fusion 360, FEA and DFMA basic knowledge in GD&T.

Awards:

- Spot award for best performance (2018/Altran)