SHANMUGA SUNDARAM KUMARAVEL

OCCUPATION: DIMENSIONAL VARIATION ANALYSIS (DVA) ENGINEER

INFORMATION

Phone:
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Email:
shanmuk88@gmail.com

SKILLS

Tolerance Stack-ups

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Dimensional Variation Analysis (DVA)

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Geometric Dimensioning & Tolerancing (GD&T)

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Product Lifecycle Management (PLM)

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3D Modeling

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Product Development

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AutoCAD

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PROFILE

Mechanical Engineer with over 11 years of experience in Automotive Manufacturing and Aerospace Product Development domain. (Dimensional variation analysis/ tolerance stackups/ GD&T)

WORK EXPERIENCE

Contract Associate, Satyam Ventures Engineering Services, Hyderabad (India)
- Dimensional Variation Analysis (DVA)

Dimensional Variation Analysis (DVA) Engineer, Ford Motor Private Ltd, Chennai (India)
January 2016-August 2022
- Developed a methodology for calculating in-process machining tolerances based on machining process knowledge and required final part print tolerance. Deployed method in production drawings of 4 powertrain parts.
- Organised training on machining tolerance stackup method.
- Performed Dimensional Variation Analysis (DVA) simulations to check attachment and interference between parts and gaps.
- Supported development of excel macro-based tool to predict part inspection time during CMM measurements of powertrain parts. Mentored internship candidate.

Senior Designer, EASi Engineering, Chennai (India)
December 2014-January 2016
- Assigned to work for Ford Motor Private Ltd on in-process tolerance stack-up development.

Engineer, Eaton Technologies Private Ltd, Pune (India)
August 2011-December 2014
- Supported design of Remote Data Concentrator (RDC) housing. The product development cycle involved participation in requirements review, 3D modeling and evaluation, tolerance stack-up, Stress Analysis review using Finite Element Analysis, standard parts & material selection, drawings release and prototyping for testing.
- Created controller design process Body of Knowledge(BoK).
- Calculated losses occurring at different interfaces of Radial Piston Pump
- Organized Innovation event to gather ideas that solve problems pertaining to specific Aerospace Products/processes

EDUCATION

Indian Institute of Technology Madras, Chennai (India), Master and Bachelor of Technology in Mechanical Engineering
July 2006-July 2011

Cumulative Grade Point Average (CGPA): 8.2/10
Masters Thesis: Retrieval of Atmospheric Temperature and Humidity using Artificial Neural Networks
Masters Specialization: Energy Technology

RS Krishnan Higher Secondary School, Tiruchirapalli

All India Senior School Certificate Exam (Class 12)
Major: Computer Science
Score: 459/500

All India Secondary School Exam (Class 10)
Score: 452/500

SOFTWARE

Teamcenter Vis VSA
Catia 3DCS

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MS Office

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Pro Engineer (ProE)

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Enovia, Teamcenter PLM
Dassault 3D Experience

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MATLAB

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Programming Languages:
C, C++

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LANGUAGES

English

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Tamil

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Hindi

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TRAINING

Eaton Technologies Private Ltd, Pune (India)
- Design for Six Sigma (DFSS) Green Belt

Internship, GE Global Research and Technology, Bengaluru (India)
May 2010-June 2010
- Modelling and validating membrane compressors

Internship, FLSmidth, Chennai (India)
May 2009
- Ballmill Foundation Loads calculation

Internship, Indira Gandhi Centre for Atomic Research, Chennai (India)
May 2008
- Presented poster on "Prediction of Creep Life of 316L(N) stainless steel using Artificial Neural Networks" in International Conference on Creep, fatigue, Creep-fatigue Interaction.