



Siva Venkata Sai Anudeep SAMI

“Being proficient, autonomous, innovative in the field of Mechanics, Structures and Materials , I am seeking for a full time opportunity to completely utilize my training and skills, while contributing to the success of the company”. ➡ **Availability** : 3 months

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Nationality: Indian

📍 Paris, France

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EXPERIENCES

Full time : July(2020)- Present | R & D Mechanical Engineer (design & analysis) | HTC Assistance, Paris

“Design, analysis and optimization of mechanical circulatory cardiac assistance device (Hydraulic) ”.

- Design and assembly of different parts (stents) of device in Solidworks and prototyping with 3Dprinter .
- Stress analysis and simulations of non linear structural behavior of Nitinol stents using Abaqus (FEA) and fatigue life calculations with Fesafe.
- Selecting the good coating material to cover the stents maintaining the specification requirements of the device.
- Optimization of stents parameters by visualizing different simulation results using Tosca and Isight.
- Shear stress, turbulence and efficiency simulations of the device with the help of Ansys CFX.
- Writing technical specifications, verification and validation tests, bench test creation, QMS according to ISO13485 and meetings with manufacturers.

Internship: 2019 (6Months) | CAE/Calculations Engineer | LAAS-CNRS, France

“ Finite element modelling with Abaqus and python for the stress and thermal analysis on micro-electro mechanical system (MEMS) ”.

- 2D, 3D Design and simulating the structural behavior of the system under static and dynamic pressure to validate the dimensions and design.
- Thermal simulation under different thermal condition to choose the materials of the system.
- Python scripting to create an Abaqus plugin for automation of geometry creation / material definition / meshing / analysis set up with customized post processing requirements.
- Interpreting simulation results with PDE's solved by python to compare the results.

Internship : 2018 (5Months) | Materials & Calculations Engineer | Safran Engines, France

“ Calculation of properties and Understanding of Microstructure evolution in Additive Manufactured Ni based super alloy (Waspaloy) ”.

- Analyzed and understood the micro-structure evolution and grain orientation in Laser Metal Deposited Waspaloy using scanning electron microscopy(SEM).
- Research of the effect of composition on the microstructure and properties of the additive manufactured Ni-based super alloys.
- Characterized the material under built condition and after specific heat treatments.
- Low cycle fatigue and creep calculations using Excel with the help of data obtained from experimental test.
- Proposition of different solutions to eliminate manufacturing defects like inclusions, voids and nucleation in the microstructure to improve its properties.

Internship: 2016 (3Months) | CAE Engineer HAL Helicopters, India
“Structural and vibrational analysis on the helicopter main rotor blade”.

- Stress, deformation study and dynamic analysis along the length of the blade for different materials like Aluminum, composites of different orientations.
- Validated the best material among the three with the help of static and modal analysis.

CERTIFICATIONS & ACHIEVEMENTS

- Completed a certification program from Altair university on Nonlinear finite element modelling and Fatigue modelling of materials via online learning platform.
- Designed and manufactured a small jet engine prototype as undergraduate project and tested in the university laboratory.
- Paper presentation on a topic Conceptual design of fixed wing Unmanned Aerial Vehicle at International conference on Innovative research techniques in Aeronautical engineering.

TECHNICAL SKILLS

- **Numerical Simulations**
- **Mechanical designing**
- **Nitinol stents** : Design & Analysis
- **Analysis** : Structural (Linear, Non-linear), Vibrational, Thermal.
- **Calculations**: FEM, Static, Dynamic, Fatigue, Creep
- **Materials** : Superalloys, Composites, Polymers.
- **Others** : Plasticity, Visco-plasticity, Corrosion, ISO13485

SOFTWARES

- **CAE Simulations**: Abaqus, Ansys, Flow vision, Hyper Works
- **Conception CAO** : SolidWorks, AutoCAD
- **Programming** : Python, C
- **Others** : MS office , SAP

EDUCATION

Masters : Aeronautical Mechanics and Energetics (AME) 2017-2019
École Nationale Supérieure de Mécanique et d'Aérotechnique (ISAE-ENSMA), France
Specialization : Structural Mechanics & Materials

Bachelors: Aeronautical engineering 2012-2016
Hindustan Institute of Technology & Sciences, India.

LANGUAGES

English Fluent (C1)
French Intermediate (B2)
Telugu Fluent
German Beginner

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REFERENCES

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