Curriculum vitae

Sesha Sai

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Bengaluru, India

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Carrier Objective:

To become a successful professional in the field of CFD and to work in an environment where I can utilize my knowledge and amplify them.

Technical Skills

- **CFD Solver**: HiFUN, ANSYS FLUENT, OpenFOAM
- **Grid Generation**: ICEM CFD, SALOME, OpenFOAM -SnappyHex, ANSYS Mesher, Star-CCM+
- **CFD Postprocessor**: Paraview, TecPlot
- **CAD Modeling**: SolidWorks
- **OS**: Linux, Windows
- **Documentation**: MS Office, Latex
- Web design

Work Experience

Present Position:

Organization   : **Dept. of Aerospace Engineering, Indian Institute of Science (IISc), Bangalore**

 Position   : **Project Assistant**

Duration   : **Dec 2018 – Present**

Nature of Work : **CFD Process: Grid Generation, Flow Simulation and Analysis**

Area of Work   : **Aerodynamic Analysis of Propeller Aircrafts**

Project Description:

- o Aerodynamics analysis of Aircraft with propellers.
- o Performance analysis of the propeller.
- o Steady state analysis using Actuator Disk Method and Multiple Rotating Frame of Reference method (MRF).
- o Unsteady analysis using Sliding Mesh Calculation.
- o Hybrid Unstructured Meshes.

Experience:

- o Generating good quality Structured Meshes, Hybrid Unstructured meshes and Flow Aligned Meshes.
- o Performing grid convergence study to arrive at an optimal grid size.
- o Different ways of simulating propellers and rotary wings.
- o Stationary and Moving Mesh Unsteady Simulations.
- o Post-processing in an automated environment for Unsteady calculations.
- o High fidelity turbulence flow simulations using DES by the way of interacting with research students:
  - ➢ Synthetic jet flow simulation using moving meshes.
  - ➢ Supersonic base flow near the wake of a cylindrical Aft Body analysis.

Organization: S & I Engineering Solutions Pvt. Ltd., Bangalore

 Position   : **Intern**

Duration   : **April 2018 – Nov 2018**

Experience:

- o Attended a course on "Industrial CFD"
- o Efficient CFD process from pre-processing to post-processing.
- o Grid quality requirements for industrial CFD applications.
- o Generated Structured and Hybrid Unstructured grids for:
  - **Aerospace Vehicles:**
    - ➢ Aircraft in Cruise Configuration (NASA CRM)
    - ➢ Aircraft in Landing and Take-off configuration (NASA Trap Wing, DLR-F11)
    - ➢ Fighter Aircraft (F-16)
    - ➢ Slender body Configuration (Missiles)
  - **Internal Flow Analysis:**
    - ➢ Diffuser
    - ➢ Bended Duct

Automotive Vehicle:
- ➢ Ahmed body
- ➢ DrivAer Car Model

Marine:
- ➢ Navel Ship Configuration (Frigate-SFS2)
- ➢ Submarine Configuration

o CFD Automation using OpenFOAM-SnappyHex Mesher and HiFUN Solver for multi-body simulations.

IT Experience:

- Dec'14 – Mar'15: Training from INFOSYS on Dot Net, RDBMS and Java technologies during Dec'14 to Mar'15 at Hyderabad.

Academic Qualifications

Bachelor of Technology *2010-2014*	Mechanical Engineering **CGPA: Distinction (7.1/10)**	SCSVMV University, TN, India
12th Standard *2010*	Math's, Physics, Chemistry **81.10%**	Narayana Junior College, A.P, India
10th Standard *2008*	SSC **72%**	R.R English Medium School, A.P, India

Project Work:

Academic : **SCSVMV University, Kancheepuram, Tamil Nadu**
Project : **Final Year, B.E**
Duration : **Jan 2013 – May 2014**

- Studied performance, emission and combustion characteristics of a 4-stroke engine with Cashew Nut Shell Oil, Camphor Oil, Turpentine and Diesel.

Personal Skills:

- Problem solving skills.
- Willingness to learn and hard worker.
- Discipled and dedicated.
- Willing to acquire knowledge and new skills.

Personal Information:

- Name : M. Venkata Seshasai
- Father's Name : M. Venkata Seshaiah
- Sex : Male
- DOB : 07 Aug 1993
- Marital Status : Single
- Languages Known : English, Telugu, Tamil
- Nationality : Indian

DECLARATION

- I do hereby declare that the information furnished above is true to the best of my knowledge and belief.

M.V.Seshasai