Yuvarajendra Anjaneya Reddy

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CAREER OBJECTIVE

To pursue my career in a challenging environment, to put my skills and knowledge into application for a real cause. Adaptability, zeal for learning, out of box thinking are the elements, that briefly describe my personality. Passionate about developing innovative and efficient ways of solving physics in the field of CFD, mechanical design, aerodynamics, thermodynamics and heat transfer. Intrigued about simulations and analysis, I hold a master's degree in Aeronautical engineering from Linköping university and bachelor's degree in the same from Visvesvaraya Technological University, India. I hope that, someday I'll make a valuable contribution in automotive and aviation world.

WORK EXPERIENCE

Masters thesis work — **Stockholm, Sweden**
Ericsson AB — *6 mo, Jan 2020 – Jun 2020*

Numerical model of a physical climate chamber was built in ANSYS Fluent, validating it against experimental data performed inside the chamber. CFD turbulence modeling, heat transfer in buoyancy driven flows, signal processing, setting up experiments and data handling were the key aspects

Product Development Engineer - CAE (CFD) — **Bengaluru, India**
Sri Venkateshwara Engineering — *1 yr 1 mo, Aug 2017 – Aug 2018*

Carried out CFD simulations of gas relief valves, regulators and hoses using ANSYS Fluent and Gambit. 2D and 3D CAD models were generated using Solidworks, Catia V5 and AutoCAD. Customer interaction and review based design modification, optimizations and quality controls were additional responsibilities that were fulfilled. Structural analysis of in-house developed products were carried out using ANSYS Mechanical APDL and LS-Dyna

EDUCATION

Linköping university — **Linköping, Sweden**
Masters program — *Sep 2018 – Nov 2020*
Aeronautical engineering, CGPA : 3.6/4

Visvesvaraya Technological University, MVJCE — **Bengaluru, India**
Engineering Bachelors — *Aug 2013 – Jun 2017*
Aeronautical engineering, 82.33 %

MAJOR SUBJECTS

- Aerodynamics basic course, advanced course and project course, Computational Mechanics (FEM and FEA)
- Computational fluid dynamics (CFD), Fluid Dynamics, Computational heat transfer, Turbomachinery
- Gas turbines, Road Vehicle Dynamics, Thermodynamics, Aircraft performance, Aircraft structures,
- Aircraft detailed and Conceptual Design, Helicopter Dynamics, Flight Mechanics, Composite materials
- Engineering Management, Engineering System Design, Control Engineering, Data processing

TECHNICAL SKILLS

- CFD - **ANSYS Fluent, CFX, Mechanical APDL**, **Star CCM+**, **ICEM Mesh** , **COMSOL**, **Flowtherm**
- Design and CAE - **Catia V5** , **CREO**, **Solidworks, Siemens NX**, **SolidEdge ST4**, , **ModeFrontier**, **DoE** , **LS Dyna**
- Programming –**Python** ,**C** ,**Java**, , **MATLAB**, **GPU**
- **Photoshop**, **Simulink**, **HPC, Cluster computations**, **Paraview** ,**LaTeX**, **Excel Macros, VBA**
- **Lean and Agile, Microsoft Word**, **Excel**, **Powerpoint, Minitab**

LANGUAGES

- **English** [fluent], **Swedish** [intermediate] and **German** [A1 certified]
- **Kannada,Hindi,Telugu,Urdu,Tamil** [fluent]

SOFT SKILLS

- Optimizing mundane tasks
- Scientificness
- Adaptability
- Effective communication

MAJOR PROJECTS

Master Thesis - Towards a Virtual climate chamber *Ericsson AB, Stockholm, SE*
Involves CFD methodology. The project was about making the testing, measurement and simulation, verification techniques more sustainable in telecommunication industries. A numerical model of a physical climate chamber(used for conducting reliability and thermal tests on electrical equipment), was developed in ANSYS Fluent and was verified against experimental calculations made using ultrasonic anemometer.

Thermal simulations of an 'Antenna' and 'District Heating' simulations in COMSOL *Linköping university, SE*
Real time transient simulations were performed on an antenna used in the telecommunication industry, analysing its heat transfer capabilities and behaviour. A District heating network was simulated in COMSOL for heat transfer analysis. Modeling software like CATIA V5 and ModeFrontier were used for CAD and optimisation.

UAV design and analysis for medical goods transport *Linköping university, SE*
Project was about building a detailed 3D CAD model in CATIA V5, prototyping electric UAV that would aid in the transport of medical emergency goods in remotely inaccessible parts of the world. Later on extensive aerodynamic analysis in ANSYS Fluent, XFoil and COMSOL were carried out.

Aerodynamic optimisation of pipe flow in ANSYS Fluent *Linköping university, SE*
The main goal of this study is to optimise the geometry of the pipe flow, so as to minimise the pressure losses as the fluid flows over the bends using NLQPL and MISQP algorithms in ANSYS Fluent.

Car roof box design and performance optimisation in CFD using ANSYS Fluent *Linköping university, SE*
Roof top box on the Ahmed body was built and optimised for aerodynamic performance analysis to achieve lowest possible quantity of drag. Also, the effects of the rear spoiler were determined.

Design and Fabrication of a Gas Turbine Engine. *MVJCE, Bengaluru, IN*
A very interesting project of manufacturing a scaled down model of working gas turbine engine. This prototype would help to serve as a efficient replacement for the long running motor driven machinery in the industries. The software used were Solidworks, Gambit mesher, AutoCAD and SolidEdge ST5

LEADERSHIP ACTIVITIES AND ACHIEVEMENTS

- **Award:** 'Know Your Flow' award, for best poster presentation in CFD [2019]
- **Organiser:** Cultural activities at Linköping university [2019]
- **Host:** Event coordinator in the aero modeling event at MVJ College of Engineering [2016]
- **House captain** for 2 years in High school [2008 – 2010]
- **Stage anchor** in the annual school fest [2011]
- **State level athlete:** Runner up in Discuss throw competition [2009]

REFERENCES

Roland Gårdhagen
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Applied Thermodynamics
and Fluid Mechanics
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