Last Updated on 3rd January 2024

Rohinth Udhayakumar

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SKILLS

PROGRAMMING

Experienced:
Python • CATIA V5 • Ansys
Familiar:
Solidworks

TOOLS/APPLICATIONS

Ansys mechanical APDL • Excel • MATLAB

COURSEWORK

Aerodynamics
Thermodynamics
Fluid mechanics
Finite Element Analysis
structural dynamics
Python
Computational Fluid dynamics(CFD)

EDUCATION

SASTRA UNIVERSITY

Tamil nadu,India
BTECH AEROSPACE ENGINEERING
GPA-3.22 | First class distinction
Graduated- Sep 2023

JAWAHAR SCHOOL

Neyveli,tamil nadu
CLASS 12
Overall score-88 percentage

LANGUAGES

English - Fluent
Tamil - Native

PROJECTS

AERODYNAMIC CHARACTERISTICS OF A CIRCULAR CYLINDER WITH RIDGES (WIND TUNNEL TESTING)

Jan 2023-May 2023

- Facilitated wind tunnel testing to measure surface pressure with 12 ridges and with cross section of 1.5,2,3(in mm).
- Employed MATLAB to analyze time series data comprising over 10000 distinct data points spanning over 50 data sets.
- Executed flow simulation in ansys for numerical study.

SUPPRESSION OF VORTEX INDUCED VIBRATIONS WITH STRAKES

Jan 2023-May 2023

- Acquired and scrutinized 60000+ pressure data, determining shedding frequency through PSD analysis.
- Calculated shedding frequency at a specific Strouhal number through analysis of the Power Spectral Density (PSD) plot, unraveling crucial insights into the system dynamics based on data from over 60,000 pressure readings.

FLOW PROPERTIES AT THE EXIT OF MACH 1.8 NOZZLE (CFD-ANSYS)

Aug 2022 - Dec 2022

- Designed a 3D Nozzle using SolidWorks (Mach 1.8).
- Executed simulation with over 100000 iterations in ANSYS .

EXPERIENCE

INTERNSHIP AT NLCIL

Feb 2022 - Mar 2022
Boiler maintenance department,Thermal power plant.

- Observed daily operations in the thermal power plant,ensuring compliance with safety protocols.
- Contributed in machine parts inspections to ensure optimal functioning. Worked closely with maintenance teams to identify and report equipment issues.

POSITION OF RESPONSIBILITY

- Member of University sports **hospitality team**,2023 | Supported team to manage sports environment of 800+ students.
- **Volunteer** in "Workshop on Exponential technologies",guided 200+ students for a campus tour including laboratories organised by mechanical department of SASTRA,2023
- Member of the University Tamil Street Play Club,participating in vibrant performances,reaching audiences of 300+and promoting cultural awareness within the campus community,2019-2022.

ACHIEVEMENTS AND CERTIFICATIONS

- MATLAB Onramp,mathworks,2023
- GE Aerospace supply chain Virtual experience program on forage,2023.
- Presented a research paper at a prestigious international conference, showcasing expertise to an audience of 100+ , ICARFMN-2023.
- Soft skill development, NPTEL,2022.

5th January 2024

Rohinth Udhayakumar

Research and Development Design Engineer
Ref: REQ-240002

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Dreaming of joining Formula 1 has been a wild ride. From the first time I watched those sleek machines tear up the racetrack, I was hooked. The sheer speed, precision, and adrenaline rush that comes with F1 racing is like nothing else. unlike other race challenges F1 is a race for the people who made them, I imagined myself making those machines, behind the wheel pushing my own limits and the car .But reality hits hard. The path to F1 is incredibly demanding, both physically and mentally. The competition is fierce, and it takes more than just talent to make it to the top. It's a tough road, but the dream persists.

I have spent an entire semester working on projects, specifically manipulating pressure data using MATLAB. Achieving the desired results required a high level of accuracy. This experience provided me with valuable skills in analysing numerical case studies using Ansys understanding CFD and performing data analysis. I have also done a mini project on studying fluid flow inside a nozzle with mach 1.8 using Ansys Fluent. The project scale was small but learning was huge.

During my internship ,I had the privilege of being actively involved in the day-to-day operations of a thermal power plant. I participated in routine observations, which included monitoring and recording critical operational parameters. This allowed me to gain valuable insights into the intricate workings of a power plant and develop a deep understanding of the processes involved.

I welcome the opportunity to discuss how my skills and background can benefit Mercedez. Thank you for considering my application. I look forward to the possibility of joining your team and contributing to the continued success of the company.

Best regards

rohinth udhayakumar