



Gourisankaran Pradeep Pillai

Nationality: Indian **Date of birth:** 14/10/1999 **Gender:** Male

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WORK EXPERIENCE

ITT Tutor

Studierendenwerk Darmstadt [12/2023 – Current]

City: Darmstadt

Country: Germany

- Volunteer
- Intercultural Tutors Team (ITT), Studierendenwerk Darmstadt

4th Year Representative

SAEINDIA CET (Collegiate Club of the Society of Automotive Engineers) [10/2021 – 06/2022]

City: Thiruvananthapuram

Country: India

- Demonstrated active involvement and leadership as a notable member of SAEINDIA CET.
- Successfully managed various club-related duties, including recruitment efforts, workshops, and competitions.
- Moderated several technical talks, notably during Tech Rave, a technical event hosted by SAEINDIA CET in 2021.
- Played a key role as the Fourth Year Representative, representing the club throughout the course of study.

Intern

ISRO (Indian Space Research Organisation) Inertial Systems Unit [28/12/2020 – 28/01/2021]

City: Thiruvananthapuram

Country: India

During my internship, I gained expertise in spacecraft disturbance torque computation. I performed essential coordinate transformations for satellite representation in a Low-Earth circular orbit. I studied and derived mathematical expressions for gravity gradient (GG) torque, solar radiation pressure, and aerodynamic drag as sources of disturbance torque. I also analyzed the impact of Earth's oblateness on the GG torque.

Using MATLAB, I computed and examined the variations of disturbance torques for one orbit. This information was crucial for sizing the required spacecraft actuator. Additionally, I submitted a detailed report summarizing the study.

EDUCATION AND TRAINING

Master of Science in Mechanics

Technische Universität Darmstadt [10/2023 – Current]

City: Darmstadt

Country: Germany

Website: <https://www.tu-darmstadt.de/index.en.jsp>

Field(s) of study: Mechanics

Bachelor of Technology in Mechanical Engineering

College of Engineering Trivandrum - APJ Abdul Kalam Technological University [07/2018 – 01/2023]

City: Trivandrum

Country: India

Website: <https://www.cet.ac.in/>

Field(s) of study: Mechanical Engineering

Final grade: 7.67 (In German Grading System: 2.3)

Number of credits: 182

Thesis: Study of Aerodynamic Effects on Shape and Profile Variation of Rear End Spoiler on a Passenger Vehicle

Main Subjects:

- Mechanics of Solids, Fluid Mechanics, Thermodynamics, Advanced Fluid Mechanics, Automobile Engineering, Design of Machine Elements, Applied Linear Algebra, Numerical Methods

LANGUAGE SKILLS

Mother tongue(s): **Malayalam**

Other language(s):

English

LISTENING C1 READING C2 WRITING B2

SPOKEN PRODUCTION C1 SPOKEN INTERACTION C1

German

LISTENING A2 READING B1 WRITING B1

SPOKEN PRODUCTION B1 SPOKEN INTERACTION B1

Levels: A1 and A2: Basic user; B1 and B2: Independent user; C1 and C2: Proficient user

DIGITAL SKILLS

CAD: AutoCAD, Autodesk Fusion 360, Siemens NX / Scientific Computing and Programming: MATLAB / Finite Element Analysis: ANSYS / Programming Language: Python / Microsoft Excel

PROJECTS

Study of Aerodynamic Effects on Shape and Profile Variation of Rear End Spoiler on A Passenger Vehicle

[06/2021 – 06/2022]

The rear spoiler, an external component installed on the rear of a sedan car to enhance its aerodynamic efficiency, has been meticulously designed, developed, and evaluated through advanced numerical simulations using the ANSYS 2021 software. The objective of the study was to investigate and analyze the impact of the rear spoiler on the generation of lift, drag, and pressure distributions. The NACA 4412 design aerofoil wing specifications were adopted as the reference standard for the study, and the Siemens NX software was utilized to create a detailed three-dimensional model of the wing with varying thicknesses in order to thoroughly examine its aerodynamic properties.

MANAGEMENT AND LEADERSHIP SKILLS

Effective Communication

I have a proven ability to communicate effectively with a wide range of individuals and groups. As a class representative, I effectively conveyed student concerns and feedback to faculty and administration, demonstrating my commitment to fostering positive communication. My experience as an ITT tutor further enhances my ability to seamlessly connect with and engage diverse audiences.

Leadership

Demonstrated leadership abilities through various roles, such as serving as the Fourth Year Representative of SAEINDIA CET and managing club-related duties, organizing workshops, and leading recruitment efforts.

HOBBIES AND INTERESTS

Sports in General

I have a strong interest in a variety of sports, including football, cricket, and tennis. I do actively participate in athletics and lacrosse.

Travel

Travelling, discovering new places and cultures, and meeting new people excite me.

Automotive Enthusiast

I have a genuine passion for automobiles and a keen interest in the ever-changing automotive industry. It's a dynamic and exciting world that fuels my enthusiasm.



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