

Utkarsh Aashu MISHRA

PERSONAL DATA

ADDRESS: BG-03, Jawahar Bhawan, Indian Institute of Technology, Roorkee
Uttarakhand, India - 247667
PHONE: +91-8240976847
EMAIL: umishra@me.iitr.ac.in
GITHUB: github.com/UtkarshMishra04
WEBSITE: <https://utkarshmishra04.github.io>

EDUCATION

JULY 2017 - Present Bachelors of Technology in MECHANICAL ENGINEERING | 50%
Indian Institute of Technology(IIT), Roorkee, India
CGPA: 9.044/10 | [Detailed List of Courses](#)

INTERESTS

Robotic Design and Autonomous Mobility, Deep Learning, CFD Mathematical Modelling and Optimization

INTERNSHIPS

Jul 2019	Quasi Monte Carlo Importance Sampling on Radiative Heat Transfer
MAY 2019	<i>Dr Ankit Bansal</i> <i>SPARK' 19, IIT Roorkee, India</i>
	Working on Radiative Heat Transfer problem through Monte Carlo Method along with Importance Sampling technique.
	Accuracy improvement was studied and computation problem was optimized through Supervised Learning.

RESEARCH EXPERIENCE

Ongoing	Trajectory Planning and Optimization of Cable-Driven Parallel Robots
AUG 2019	<i>Dr Pushparaj Mani Pathak</i> <i>IIT Roorkee, India</i>
	Working on trajectory planning through genetic algorithm and workspace analysis of Cable Driven Parallel Robots
	Application to Construction purposes, through decoding CAD STL files and appropriate motion planning.
Feb 2019	Modeling and Simulation of Flow around NACA Series Airfoils
OCT 2018	<i>Dr Ameeya Kumar Nayak</i> <i>IIT Roorkee, India</i>
	Working on implementation of numerical methods with Computational Fluid Dynamics to NACA series airfoils.
	Work include turbulence modelling, applying concepts of transition and boundary layer effect and conformal mapping. Simulations and calculations were done on ANSYS Fluent and MATLAB

SKILLS

Programming Languages:	C++, JAVA, PYTHON, JAVASCRIPT-REACTJS, NODEJS, HTML, CSS
Softwares:	Anaconda, MATLAB, Visual Studio, Solidworks, Ansys (Design, Meshing, Structural, Thermal, Fluent), ROS Package
Other Skills:	Adobe-Illustrator, UBUNTU, TEX \LaTeX
Languages:	ENGLISH(SRW), HINDI(SRW), BENGALI(SRW)
Additional Courses Taken:	Economics, Marketing Research, Vibrations and Noise, Introduction to Self-Driving Cars(Cousera-Certificate), State Estimation and Localization for Self-Driving Cars (Cousera-Certificate), Visual Perception for Self-Driving Cars (Cousera-Certificate)

EXTRA-CURRICULAR

<i>Current</i> JAN 2018	Mechanical Team Member at IIT Roorkee Motorsports, IIT Roorkee <i>The official team representing Institute in Formula SAE Events</i> As a member of the Aerodynamics Subsystem, dedicated to Computational Fluid Analysis and vehicle shape optimization. Works include designing, modeling and fabrication of Aerodynamic components like Front and Rear Wings, Undertray, Nose, Side Pods and ducts. Simulations are performed using Ansys Fluent. Enthusiastic about self-driving and vehicle automation with the implementation of various deep learning algorithms and computer vision models
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AWARDS AND ACHIEVEMENTS

MAY 2019	Selected for the SPARK Research Internship Program by IIT Roorkee (Certificate)
MAY 2017	Joint Entrance Examination, Advanced (Indian Institute of Technology) All India Rank 2223, 98.99 percentile
MAY 2017	Awarded the prestigious KVPY Scholarship (Kishore Vaigyanik Protsahan Yojana) in-stream SX (2016) (Certificate) (Instituted by the Department of Science and Technology, Government of India)
MAY 2017	Achieved Merit Certificate in Physical Education in the CBSE AISSEE 2017 (Standard 12)(top 0.1%of examinees) (Certificate)

POSITION OF RESPONSIBILITIES (AND OTHER [CERTIFICATES](#))

CURRENT	Aerodynamics Engineer at IIT Roorkee Motorsports, responsible for the Designing and Optimization of the Aerodynamic components of our Formula SAE Vehicle.
JAN-JUL 2019	Undergraduate Teaching Assistant, Academic Reinforcement Program, Teaching Assistant for the course MAN-004 Numerical Methods.
2018-19	Developer and WoC Mentor at Mobile Development Group, IIT Roorkee
AUGUST 2017	National Cadet Corps, 3UK NCC IIT Roorkee, India Successfully gave the Guard of Honour to our Institute's Director on the occasion of Independence Day

REFERENCE:

Dr. Ankit Bansal
Assistant Professor
Mechanical Engineering Department
Indian Institute of Technology Roorkee
India
[✉abansfme@iitr.ac.in](mailto:abansfme@iitr.ac.in)

Dr. Ameet Kumar Nayak
Associate Professor
Mathematics Department
Indian Institute of Technology Roorkee
India
[✉nayakfma@iitr.ac.in](mailto:nayakfma@iitr.ac.in)