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| **ABHINAV D SINGH** | | | [**abhids@iitk.ac.in**](mailto:abhids@iitk.ac.in) **| +91-7892016240** | | | |
| **EDUCATIONAL QUALIFICATIONS** | | | | | | |
| **Year** | **Qualification** | | **Institute** | | **Performance** | |
| 2019-2023 | B.Tech - Aerospace Engineering | Minor - Control Systems | | Indian Institute of Technology Kanpur | | **8.6/10.0** | |
| 2019 | Class XII, Karnataka State Board | | BASE PU College, Mysuru | | **86%** | |
| 2017 | Class X, CBSE Board | | Manasarowar Pushkarini Vidhyashrama, Mysuru | | **10.0/10.0** | |
| **ACHIEVEMENTS** | | | | | | |
| * Received a full-time offer from **McKinsey & Co.** as a **Business Analyst** during the campus placement drive at IIT Kanpur *2022* * Received **Academic Excellence Award**, given to the **top 10%** of students in a batch at IIT Kanpur, for exceptional academic performance *2021* | | | | | | |
| * Received **Outstanding Fresher Award**,awarded to **1 out of 1100+ students** for exceptional scholastic and co-scholastic performance *2020* | | | | | | |
| * Secured **Top 30 rank** in **RMO**, Karnataka region to reach **Indian National Mathematics Olympiad (INMO) camp** held at ISI Bangalore *2018* | | | | | | |
| **RESEARCH EXPERIENCE** | | | | | | |
| **Research Intern | *Texas A&M University* | *Dr. Diego Donzis*** | | | | *May’22-Jul’22* | | |
| *Among* ***8*** *students selected from IIT Kanpur for the* ***Halliburton Engineering Global Program*** | | | |  | | |
| *Objective* | * To study asymptotic behaviour of **Reynolds stresses** at the walls in unforced compressible turbulent channel flows | | | | | |
| *Strategy* | * Collaborated with other members of the research team to conduct a **literature survey** of similar published research papers * Performed **Direct Numerical Simulations (DNS)** on domain with a grid size of **512x512x256** cells with **hyperbolic “y” sizing** * Modelled and plotted the relationship between flow variables and wall distance to capture **near wall turbulence effects** | | | | | |
| *Impact* | * Analysed the behaviour of Reynolds stresses by fitting 2 different **power series laws** for different regimes of flow * Identified relevant changes in the asymptotic trend to **improve turbulence modelling** for various Reynolds Numbers | | | | | |
| **LEADERSHIP EXPERIENCE** | | | | | | |
| **Overall Placement Coordinator | *Students’ Placement Office, IIT Kanpur*** | | | | *Mar’22-Mar’23* | | |
| *Felicitated with a* ***Certificate of Exemplary Leadership*** *by* ***Director, IIT Kanpur*** *for recognition as Overall Placement Coordinator*  *Previously Core Team Member as* ***Assistant******Placement******Coordinator*** *in 2021-22 and recorded* ***highest number of offers (1490+)*** *ever at IIT Kanpur* | | | | | | |
| *Leadership* | * Spearheading a **4-tier team** of **150+ members** to conduct placement, internship drive for **1,600+ & 1000+ students** * Representing students’ interests in **Students’ Placement Committee (SPC)**, common **faculty body of 23 departments** | | | | | |
| *Initiatives* | * Ideated and deployed an **in-house portal** to cater to the placement and internship processes for **2500+ students** * Collaborated with **Prepleaf** & **MyAnalyticsSchool** for sector wise placement preparation frameworks helping **1,300+ students** * Coordinated with the **Alumni Association of IIT Kanpur** for identification and conversion of opportunities in the industry * Established the **Toastmasters Club at IIT Kanpur** through sponsorship from IIT Kanpur alumni worth over **1.5 crore INR** | | | | | |
| *Impact* | * Firms such as **Bain**, **BCG**, **Finmechanics** and **Morgan Stanley** registered for the **first time** during the internship drive 2022-23 * Recorded **highest number of offers** made till date with **170+** offers & **130** acceptances on Day 1 of internship drive 2022-23 * Observed a **6-fold increase** and a **50% Y-o-Y growth** in internship and placement offers in phase II drive of 2021-22 | | | | | |
| **Students’ Senate Nominee | *Department Undergraduate Committee (DUGC), AE, IIT Kanpur*** | | | | *Aug’20-Aug’22* | | |
| *Leadership* | * Represented **300+** students of Aerospace Engineering and presented their requests to a committee of 8 professors | | | | | |
| *Key Highlights* | * Organized **open houses** regularly to enable students to voice their concerns and doubts regarding the academic curriculum * Sketched out an **alternate** **academic roadmap** impacting **300+** students across 3 batches in light of the pandemic * Defended **termination case appeals** and processed dual degree and double major requests on an ongoing basis * Collaborated with the **Academics and Career Council** to establish teams of **Academic and Career Department Mentors** | | | | | |
| **KEY PROJECT** | | | | | | |
| **CFD Analysis of Flow past a Dimpled Cylinder | *IIT Kanpur* | *Dr. Sanjay Mittal*** | | | | *Jan’21-Jul’21* | | |
| *Objective* | * To study the **transition to turbulence** of laminar flow past a dimpled cylinder with increasing Reynolds number | | | | | |
| *Strategy* | * Investigated flow across domain with **25 million** nodes and **73 million** elements using 3-dimensional **Large Eddy Simulations** * Computed data by solving the 3-D unsteady incompressible form of **Navier Stokes equations** using **Finite Element Method** | | | | | |
| *Result* | * Generated instantaneous and time-averaged plots of pressure, streamlines and **Q-iso surfaces** on **Tecplot360EX** * Identified flow features like **laminar separation bubble** and **downstream vortices** for a range of different Reynolds numbers | | | | | |
| **EXTRA-CURRICULAR ACTIVITIES** | | | | | | |
| **Category** | **Competition** | **Achievements** | | **Level** | | **Year** |
| *Performing Arts: Dance* | *Awarded with* ***Token of Appreciation*** *for immense contribution as a Senior Member of Dance Club, IIT Kanpur* | | | | | *2023* |
| **Inter-IIT Cultural Meet** | *Part of the contingent which secured,*   * **3rd position** in dance battle category at IIT Madras * **3rd position** in group dance category at IIT Madras | | **Inter-IIT** | | *2023* |
| **Antaragni, IIT Kanpur** | * **1sd position** out of **30+** teams in group dance category * **3rd position** out of **10+** teams in dance battle category | | **National** | | *2023* |
| **Inter-IIT Cultural Meet** | *Part of the contingent which secured,*   * **1st position** in overall dance category at IIT Bombay * **1st position** in group dance category at IIT Bombay | | **Inter-IIT** | | *2019* |
| **Antaragni, IIT Kanpur** | * **1st position** out of **30+** teams in dance drama category * **2nd position** out of **30+** teams in group dance category | | **National** | | *2019* |
| **Galaxy, IIT Kanpur** | * **1st position** in dance battle category * **2nd position** in dance drama category | | **Intra-Institute** | | *2020* |
| *Football* | **Inferno, IIT Kanpur** | * **1st position** scoring **2** goals in **3** matches | | **Intra-Institute** | | *2019* |
| *Yoga*  *Championships* | **International Dasara, Mysuru** | * **1st position** (U10 category) out of **20+** participants | | **International** | | *2009* |
| **Karnataka State Level, Mysuru** | * **1st position** (U15 category) out of **80+** participants | | **State** | | *2010* |