

SHRUTI

Third Year Undergraduate
Department of Aerospace Engineering

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Academic Qualifications

Year	Degree/Certificate	Institute	CPI/%
2018 - Present	B.Tech.(Aerospace Engineering)	Indian Institute of Technology, Kanpur	8.0/10
2018	CBSE(XII)	Manu Vatika D B School, Budhlada	88.8%
2016	CBSE(X)	SDKL DAV Public School, Mansa	10.0/10

Scholastic Achievements

- Ranked **1st out of 450+** students in the course **Introduction to Electronics** instructed by Prof. RK Bansal
- Secured an **All India Rank of 5373** in **JEE Advanced 2018** among 2.24 lakh aspirants (**in top 3%**)
- Achieved **All India Rank 7590** in **JEE Mains 2018** among 12 lakh+ aspirants all over country with **99.47 percentile**
- Secured an **All India Rank of 1769** in **Kishore Vaigyanik Protsahan Yojana** (KVPY) 2017 exam (SX Category)

Key Projects

- Formula Student Electric, IITK Motorsports** *Budget: INR 40 lacs* *(May'19-August'20)*
Faculty Advisor: Dr. Santanu De, Department of Mechanical Engineering
 - Create and validate dynamic models for vehicle's suspension systems, using **Solidworks, Simulink** and **Ansys**
 - Perform analyses using in-house codes as well as write new code in **MATLAB** for testing purposes
 - Optimize the parameters of Vehicle Suspension for development and quality (ie: ride frequency, damping factor, suspension stiffness, etc.). Write performance and test specifications to tune/validate designs
 - Optimize vehicle and body structures for enhanced vehicle dynamics (steering, handling, ride) performance
- Credit Card Fraud Detection Using Hidden Markov Model** *(Course Project)* *(April'21-May'21)*
Instructor: Prof. Avijit Khanra, Department of Industrial and Management Engineering.
 - Modeled and implemented HMM and predicted frauds with an improved accuracy as compared to other classification models
 - Refined the HMM model by varying different parameters and comparing ROC scores as the data was imbalanced with the ratio of around 91:9
- Predict Future Sales** *(Self Project)* *(May'21-May'21)*
Dataset: Kaggle
 - Performed **Exploratory Data Analyses** using seaborn and matplotlib libraries, exploring seasonality and trends of data.
 - Implemented both deep learning and time series models to compare and refine the best fitting model.

Positions of Responsibility

- Senior Team Member, IITK MOTORSPORTS** *(April'20-August'20)*
 - Coordinate the whole vehicle dynamics design for the formula electric vehicle for timely completion of deadlines
 - Mentored a team of 5** to resolve technical problems and design challenges in area of dynamic vehicle safety, comfort and gauging compliances
- Organiser, Dramatics ANTARAGNI'20** *(June'20-December'20)*
 - Unified the database of more than **50 approachable companies** by analyzing their market influences
 - Remodeled the timeline for the **First time Online** Dramatics events to fit into the new situation of pandemic
 - Spearheaded a team of **10+ students** towards organizing various online dramatics competition for Antaragni'20

Technical Skills

- Programming Languages:** C, C++, HTML, SQL, MATLAB, Python (Scikit, Pandas, Numpy, Tensorflow, Keras, Statsmodels)
- Software and Libraries:** Linux, Google Analytics, SolidWorks, Autodesk Inventor, Simulink, MS-Office

Relevant Courses

Introduction to Electronics(A*) Stochastic processes and Applications Fundamentals of Computing	Introduction to Economics Applied Probability and Statistics(A) Partial Differential Variables	Applied Numerical Methods(A) Aerodynamics Communication Skills
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Extra-Curricular Activities

- Engineered design for **Intelligent Picking Robot** for the competition **Flipkart Grid 2.0** - Robotics Challenge
- Contacted more than **200 prominent companies** from Automotive Industry for **funding and sponsorship deals**
- Engaged in several events of institute's Dramatics Society (performed in 4 street plays and 2 stage plays)
- Assisted team for successful execution of multiple dramatics competitions with more than **1000 participants** in 4-day fest as Senior Executive, Dramatics, Antaragni'19