

SHIVEN TRIPATHI

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EDUCATIONAL QUALIFICATIONS

Year	Degree	Institution(Board)	CGPA/%
July'19 – June'23 (expected)	B.Tech, EE	Indian Institute of Technology, Kanpur	9.4*/10.0
2019	CBSE – XII	Delhi Public School, Greater Noida	93.8%
2017	CBSE – X	Delhi Public School, Greater Noida	10.0/10.0

SCHOLASTIC ACHIEVEMENTS

- **Top 0.5%**, *JEE-Advanced* (amongst 160,000 candidates)
- **All India Rank 208**, *JEE-Main* (amongst 1.3 million candidates)
- **All India Rank 6**, *UPSEE* (amongst 200,000 candidates)
- **NTSE Scholar, 2017**, **Top 0.07%** to be awarded scholarship by NCERT (from 1 million candidates)
- **KVPY-SX Fellow, 2019**, **Top 1%** to be awarded fellowship by DST, India (from 100,000 candidates)
- **Top 1%**, National Standard Examination in **Physics**, 2019
- **Top 1%** (U.P.), National Standard Examination in **Chemistry**, 2019
- **Top 1%** (U.P.), National Standard Examination in **Astronomy**, 2019

WORK EXPERIENCE

Team ERA-IITK *Science and Technology Council*
Software Team March 2020 - Present

- random space

Team Humanoid-IITK *Science and Technology Council*
Software Team Nov 2019 - May 2020

- random

SKILLS

Programming Languages: C++, Python, C
Data Science: Tensorflow, Keras, Scikit, MATLAB
Robotics: ROS, OpenCV, Arduino, Gazebo, Gym
Utilities: L^AT_EX, Git, Bash, Processing

POSITIONS OF RESPONSIBILITY

- **Coordinator**, *Debating Society, IIT Kanpur 2020-21*
- **Secretary**, *Robotics Club, IIT Kanpur 2020-21*
- **Senator**, *Students' Gymkhana, IIT Kanpur 2020-21*
- **Senior Member**, *Vox Populi, IIT Kanpur 2020-21*
- **Secretary**, *Academics and Career Council, IIT Kanpur, 2020-21*

MISCELLANEOUS

- Competed in DSDC Coherence(July 2020), a Debating Tournament with over 200 speakers and finished as **Finalist** and amongst the **Top 10 Speakers**
- **Published** articles on various themes like 'Mental Health', 'NIRF Rankings', 'Research in Corona' under **Vox Populi**

RELEVANT COURSEWORK

Fundamentals of Programming (A) Linear Algebra and Ordinary Differential Equations (A) Real Analysis and Calculus (A)
Data Structures and Algorithm (*i*) Complex Analysis and Partial Differential Equations (*i*) Introduction to Microeconomics
A: Grade for excellent performance, *i*: In progress

PROJECTS

Fashion Intelligence Systems *ShivenTripathi/GRiD-Software*
Flipkart GRiD 2.0 July 2020 - Sep. 2020

Implemented Machine Learning based model to identify trends in Fashion items and generate actionable insights on trendiness of products to build a portfolio.

- Used open sourced MMFashion models to identify attributes and get features representative of styles.
- Built Fashion Vectors using a priority list obtained from the modified output MMFashion model to get individual trend ranks.
- Applied dimensionality reduction techniques like tSNE and then did clustering using kMeans to obtain visually distinct style clusters.

Finished in the Top 3 teams over India under the problem statement of Fashion Intelligence Systems from over 9200 teams.

Autonomous Indoor Drone

Flipkart GRiD 2.0 July 2020 - August 2020

- Studied and experimented various techniques related to 3D mapping of environment and maneuvering an autonomous drone.
- Evaluated approaches for building and completed simulations in a Gazebo environment.
- Employed colour segmentation and contour detection to identify gates, using Visual SLAM methods for mapping and navigation.

Finished amongst the Top 50 teams over the country to reach the Round 3 Qualifiers.

Conversational Robot *ShivenTripathi/ConversationalRobot*
Robotics CLub, IIT Kanpur May 2020 - July 2020

Developed a "talking bot" capable of listening to user, identifying intent and speaking out a meaningful response.

- Studied various preliminaries for Natural Language Processing and implemented GloVe model for generating embeddings for text.
- Experimented with different ASR methods and implemented DeepSpeech 2 trained on a limited but augmented dataset consisting of audiobooks.
- Built hybrid pipelines for response generation using pattern recognising AIML along with Topic Aware Seq2Seq Deep Learning model.

PETCat, Biomimetics *ShivenTripathi/PETcat_vision*
Robotics CLub, IIT Kanpur May 2020 - Present

- Working in the Vision subteam of the PETCat project which aims to build Biomimetic Robots.
- Implemented Face and Emotion Recognition modules using classic CV approaches combined with CNN architectures.
- Integrated individual modules into ROS nodes for easy deployment and functionality for the robot.