

Shruti Joshi

3rd Year Undergraduate
Indian Institute of Technology Kanpur

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Education

JUNE 2019*	B.TECH in ELECTRICAL ENGINEERING, IIT KANPUR	8.8/10.0
APRIL 2015	Class XII, (HSC, MAHARASHTRA) SRP JUNIOR COLLEGE, MUMBAI	94.0%
APRIL 2013	Class X, (CBSE) AECS-2, MUMBAI	98.6%
(* Expected)		

Academic Achievements

- Secured **99.50 percentile** in JEE Mains out of 1.3 million students. 2015
- Selected for the prestigious **KVPY** (Kishore Vaigyanik Protsahan Yojana) scholarship. 2015
- Scored **408/450 in BITSAT** conducted by the Birla Institute of Technology. 2015
- Awarded Merit Certificate for excellency in **National Standard Examination in Chemistry**. 2015

Ongoing Projects

- **Planning Energy Efficient Trajectories** Dec'17-Present
Mentor: Prof. Ketan Rajawat, IIT Kanpur
 - Working on a new approach to energy efficient motion planning in environments with strong and uncertain disturbances, with a mobile target in an integrated online framework.

Projects Undertaken

- **Integration of Long Term Contract and Spot Market in Capacity Markets** May'17-July'17
Mentor: Prof. Amar Sapra, IIM Bangalore
 - Worked on a resource allocation problem for optimizing integrated contracts, and formulated its dynamically programmed model.
 - Created a model for optimization of storage, processing and additional processing in a cooperative organization.
 - Performed case studies on Supply Chain Management and Price & Revenue Optimization.
- **Robotics Club Projects, Science & Technology Council, IITK** Dec'15-June'16
 - Worked on motion planning and obstacle detection using image processing, and ultrasonic sensors of a biped.
 - Developed a glove for gesture to speech recognition and helped in the development of a chat app on the institute server for the user to chat directly through gestures. (Awarded **Silver Medal** in Hardware Modelling at the **4th Inter IIT Techmeet**, Mandi and the **first position** in **Techkriti Innovation Challenge** at Techkriti 16, IITK).
 - Worked on obstacle detection, face recognition and line following using image processing. Awarded the **Best Overall Summer Project** by the Science & Technology Council, IITK.
- **Spatio-Temporal Data Interpolation** Aug'16-May'17
Mentor: Prof. Bharat Lohani, IIT K
 - Worked on improving the framework for selecting the best interpolation technique for a given dataset obtained through crowd sourcing. Implemented RANSAC algorithm for reading LiDAR measurements and detecting planes in the point cloud data.

Relevant Coursework

Fundamentals of Computing	Applications of Probability & Statistics
Linear Algebra & Ordinary Differential Equations	Introduction to Real Analysis
Partial Differential Equations	Complex Analysis
Signals, Systems & Networks	Digital Electronics
Introduction to Sampling Theory	Control Systems*
Computational Cognitive Science*	Microelectronics*
Communication Systems*	Stochastic Geometry & Modern Wireless Networks*
Introduction to Game Theory**	Principles of Communication**
Introduction to Machine Learning**	Data Structures & Algorithms**
Convex Optimization**	Artificial Intelligence**
(*) Spring '18 Semester.	
(**) Audited.	

Technical Skills

Languages: C/C++, Python, Javascript, HTML, CSS, Verilog, Shell Scripting
Tools: MATLAB, Git, Vim, L^AT_EX, Microwind, SolidWorks, Amazon EC2

Positions of Responsibility

- Served as an **Academic Mentor** for teaching and counselling first year undergrads in Mechanics. *2016-17*
- Served as a **Secretary** at Robotics Club, IIT Kanpur *2016-17*
- **Editor**, Writer & Correspondent for the campus journalism body, Vox Populi *2016-17*

Extra-Curricular Activities

- Awarded the runners-up position at the **Facebook** Hackathon on Countering Violent Extremism held at Kochi. *2017*
- Awarded the 2nd Runners-up position in the **M.R Pai Memorial** Elocution Competition, Mumbai. *2013*
- Actively participated as a Star Correspondent for '*nie*', the student edition of **The Times of India** among a group of 30 members in Mumbai. *2012-13*
- Awarded the 1st Runner-up at Spellinc Mumbai Finale Competition. *2012*
- Completed till *2nd Kyu*, *Karate* under the Shito-Ryu Foundation. *2011*
- Represented school in Basketball and Lawn Tennis tournaments at the Intra and Inter City Levels. *2008-11*