

Shruti Joshi

Junior Undergraduate
Electrical Engineering, Indian Institute of Technology Kanpur.

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Education

- 2015–2019 **Bachelor of Technology, Major in Electrical Engineering**, Indian Institute of Technology Kanpur, CGPA: 8.8/10.
(Expected)
- 2015 **Class XII**, SRP Junior College, Mumbai, 94.0%.
- 2013 **Class X**, Atomic Energy Central School -2, Mumbai, 98.6%.

Honors & Awards

- 2015 **Joint Entrance Exam Mains**, 99.50 percentile, 1.3 million candidates.
- 2015 **Scholastic Aptitude Test**, Birla Institute of Technology, State Rank 1, 408/450.
- 2015 **KVPY Scholarship Awardee**, Indian Institute of Science and Government of India.
- 2015 **National Standard Examination in Chemistry**, Merit, Indian Association of Physics Teachers, State top 1%.
- 2014 **Regional Math Olympiad**, Merit, Homi Bhabha Centre for Science Education.

Projects

- Dec'17- **Planning Energy Efficient Trajectories**, Mentor: Dr.Ketan Rajawat, IIT Kanpur.
- Present Working on the development of an online motion planner for deployment in environments with strong and uncertain disturbances, and a highly mobile target.
- May'17- **Integration of Contracts in Capacity Markets**, Mentor: Dr.Amar Sapra, IIM Bangalore.
- June'17 Worked on a resource allocation problem for optimizing integrated contracts, and formulated its dynamically programmed model.
Created a model for optimization of storage and processing in a cooperative organization.
Performed case studies on Supply Chain Management and Price & Revenue Optimization.
- Dec'15- **Robotics Club Projects**, Science & Technology Council, IIT Kanpur.
- Jan'16 Worked on motion planning and obstacle detection of a biped.
Developed a glove for gesture to speech recognition and a chat app on the institute server for the user to chat directly through gestures. **Awarded the Silver Medal in Hardware Modelling at the 4th Inter-IIT Technology Meetup and the first position in Techkriti Innovation Challenge at Techkriti'16, IITK.**
Worked on obstacle detection, face recognition and line following of a humanoid prototype. **Awarded the Best Overall Summer Project by the Science & Technology Council, IITK**
- Aug'16- **Spatio-Temporal Data Interpolation**, Mentor: Prof.Bharat Lohani, IIT Kanpur.
- Dec'16 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.

Extracurricular Activity

- 2016–17 **Academic Mentor**, Counseling Service, conducted institute level classes and one-to-one mentoring sessions for freshmen for the course PHY102: Mechanics-I.
- 2016–17 **Secretary**, Robotics Club, supervised projects, organized competitions and conducted workshops pertaining to robotics- motion planning, computer vision, and embedded systems.
- 2016–17 **Editor**, Vox Populi, acted as the editor, and a writer and correspondent for the campus journalism body.

Skills

Languages C/C++, Python, Javascript, HTML, CSS, Verilog

Tools MATLAB, Git, Vim, L^AT_EX, Microwind, Solidworks, Amazon EC2

Coursework

Introduction to Real Analysis

Partial Differential Equations

Applications of Probability & Statistics

Signals, Systems & Networks

Computational Cognitive Science*

Communication Systems*

Control Systems*

Introduction to Machine Learning**

Linear Algebra & Ordinary Differential Equations

Complex Analysis

Introduction to Sampling Theory

Digital Electronics

Microelectronics*

Stochastic Geometry & Modern Wireless Networks*

Principles of Communication**

Data Structures & Algorithms**

(*)*In Progress.*

(**) *Audited*

Miscellaneous

2017 Awarded the runners-up position at the **Facebook Hackathon** on Countering Violent Extremism held at Kochi.

2013 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 Awarded the 1st Runner-up at Spellinc Mumbai Finale Competition.

2012 Awarded the *2nd Kyu* belt level in Karate under the Shito-Ryu Foundation.

2012 Represented school in Basketball and Lawn Tennis tournaments at the Inter City and Intra City Levels.