Yash **Srivastav**

SENIOR UNDERGRADUATE · COMPUTER SCIENCE AND ENGINEERING

Indian Institute of Technology, Kanpur

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EDUCATIONAL QUALIFICATIONS

Year	Degree	Institution(Board)	CGPA/%
July'17 – June'21 (expected)	B.Tech, ME & Minor in IME	Indian Institute of Technology, Kanpur	9.2/10.0
2017	ISC – XII	City Montessori School, Lucknow (CISCE)	95.5%
2015	ICSE – X	St. Francis' College, Lucknow (CISCE)	95%

HONORS AND ACHIEVEMENTS

2019	**2nd in 15+ teams**, Student AUV Competition (SAVe), organised by **NIOT, Chennai** in 2019	*Chennai*
2017	**Top 0.7%**, JEE Advanced (amongst 160,000 candidates)	
2017	**Top 0.001%**, JEE Main (amongst 1.3 million candidates)	
2016	**Top 1%**, National Standard Examination in **Physics**	*India*
2016	**Top 1%**, National Standard Examination in **Chemistry**	*India*

WORK EXPERIENCE

Intelligent Systems Lab   *Robotics Intern*

SUPERVISOR: MR. RAVI PRAKASH, DOCTORAL STUDENT   *April 2019 - Present*

- Ported outdated available ROS code to operate on current development platform using ROS Kinetic on Ubuntu 14.04
- Actualized setup for simulation using **Rviz and Gazebo** for Universal Robots manipulator on a Guardian Robot
- Tweaked the hardware drivers and changed odometry publishers to fix position drift estimated by motor encoders
- Assisted in final aim to create collaborative autonomous robots capable of building walls, extinguishing fires

New York Office, IIT Kanpur   *Backend Software Intern*

SUPERVISOR: PROF. MANINDRA AGRAWAL   *May 2018 - July 2018*

- Worked on **Scala with Akka-HTTP** for scalable and concurrent multi threading using functional programming
- Documented and compiled the entire collection of backend Application Programming Interfaces using **PostMan**
- Fixed bugs in the Scala backend, and collaborated using Phabricator, while developing an upcoming social platform

SKILLS   RELEVANT COURSEWORK

Introduction to Programming (A∗)	Probability & Statistics	Introduction to Robotics (i)
Data Structures and Algorithm (i)	Introduction to Mechanical Design (A∗)	Introduction to Microeconomics (A)

A∗: Grade for exceptional performance, i: In progress, A: grade

Projects

Developed and tested acoustic localization system capable of estimating the Direction of Arrival of ultrasonic underwater signals from pinger, using **STFT** and **Cross-Correlation**

Entered initial build of Gazebo-ardupilot engine to simulate vehicle model in a hydrodynamically realistic environment

Realtime Onboard Dense RGB-D Mapping on UAVs
MENTOR: PROF. MANGAL KOTHARI *May 2019 - Present*
- Studied and experimented various techniques related to 3D mapping of environment using monocular and stereo cameras on Jetson TX2 for onboard implementation
- Evaluated approaches for shortcomings and processing requirements while focussing on the scarce size, computation and energy resources on Unmanned Aerial Vehicles (UAVs)

Chat-IITK
Advanced Track Project - ESC101
MENTOR: PROF. PUROSHOTTAM KAR *2nd Semester*
- Designed and developed a chat application on NodeJS, Express, and MongoDB, selected in **12** out of 400+ students
- Implemented real-time chat using Socket-IO with PassportJS for extensively implemented **authentication** and **cookie handling** for session management
- Database management implemented using MongoDB, and application deployed online on Heroku's server

Mechanical Quadruped
Course Project -TA202
MENTOR: PROF. SHANTANU BHATTACHARYA *4th Semester*
- Designed and simulated a four-legged assembly that uses Jansen's linkage mechanism to walk using Solidworks
- Made a working model of the same under constraints of size and materials using manufacturing processes such as lathing, milling and drilling

Positions of Responsibility

Team AUV-IITK
Science and Technology Council
SOFTWARE TEAM LEAD *April 2019 - Present*
- Spearheading a group of 8 people working on the software of Anahita, planning and implementing technical changes
- Maintaining software stack of Autonomous Vehicle, deployed on Git, developed using ROS, OpenCV and Gazebo

- **Secretary**, *Robotics Club, IIT Kanpur 2018-19*

- **Secretary**, *Consulting Hobby Group, IIT Kanpur 2018-19*

- **Student Guide**, *Counselling Service, 2018-19*

- **Academic Mentor**, *Counselling Service, 2018-19*

Miscellaneous

- **Runners Up** in robotic soccer event *Wild Soccer*, and *Visualise*, in inter-hall competition

- Developed an application which generated summaries of the latest news based on the current trending hashtags on Twitter as **code.fun.do** submission

- Developed basic platform game on game development framework **Unity** using JavaScript & C#, updated on Github