Mayank Mittal

Graduate student, ETH Zürich

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Education

2018–2021 **ETH Zürich**, *M.Sc. in Robotics, Systems and Control*
Thesis: "Articulated Object Interaction in Unknown Scenes with Whole-Body Mobile Manipulation"
Advisors: Prof. Animesh Garg and Prof. Marco Hutter

2014–2018 **IIT Kanpur**, *B.Tech. in Electrical Engineering*
GPA: 9.0/10.0

Experience

Professional

Sep 2019–Apr 2020 **NNAISENSE**, *Lugano*, Switzerland
Research Intern
Safe-learning and verification of controllers with Intelligent Automation team.

Academic

June 2020–Mar 2021 **University of Toronto**, *Toronto*, Canada
Visiting Student Researcher with Prof. Animesh Garg
Deep RL for in-hand manipulation and articulated object interaction.

Nov 2018–July 2019 **ETH Zürich**, *Zürich*, Switzerland
Research Assistant with Prof. Marco Hutter
Application of multi-agent RL to learn whole body control for arm-on-ANYmal.

May 2017–Aug 2017 **University of Freiburg**, *Freiburg im Breisgau*, Germany
Visiting Student Researcher with Prof. Wolfram Burgard
Deep learning to detect landing sites for aerial vehicles in a hostile environments.

Nov 2014–Jun 2018 **IIT Kanpur**, *Kanpur*, India
Undergraduate researcher

Articles

arXiv **Articulated Object Interaction in Unknown Scenes with Whole-Body Mobile Manipulation**,
Mayank Mittal, David Hoeller, Farbod Farshidian, Marco Hutter, Animesh Garg

arXiv **Neural Lyapunov Model Predictive Control**,
Mayank Mittal†, Marco Gallieri†, Alessio Quaglino, Seyed S.M. Salehian, Jan Koutnik

ICRA 2020 **Learning Camera Miscalibration Detection**,
arXiv Andrei Cramariuc†, Aleksandar Petrov†, Rohit Suri, Mayank Mittal, Roland Siegwart, Cesar Cadena

ISRR 2019 **Autonomous Vision-Based UAV for Urban Search and Rescue**,
arXiv Mayank Mittal, Rohit Mohan, Wolfram Burgard, Abhinav Valada

IROS 2018 **Vision-based Autonomous Landing in Catastrophe-Struck Environments**,
arXiv Mayank Mittal†, Abhinav Valada†, Wolfram Burgard
Workshop on Vision-based Drones: What's Next?

Teaching Experience

Jan–Apr '18 **Autonomous Navigation**, *AE640A*, Prof. Mangal Kothari, IIT Kanpur
website
- Helped in developing the course syllabus and preparing the assignments
- Guest lecturer on mathematical foundation for robotics, non-parametric filters for localization, system integration using ROS, and robot simulation

Honors

2018 **Sri. Binay Kumar Sinha Award**, *IIT Kanpur*
Best undergraduate project that has industrial applicability and social relevance.

2018 **SIIC Student Innovation Award**, *IIT Kanpur*
Best socially-relevant project of global importance among graduating students.

2018 **Science and Technology Excellence Award**, *Students' Gymkhana, IIT Kanpur*
Exceptional performance in science and technology activities pursued through the Gymkhana.

2016, 2017 **Academic Excellence Award**, *IIT Kanpur*
Equivalent to Dean's List.

2017 **WISE Scholarship**, *German Academic Exchange Service (DAAD)*
Awarded to 192 students to conduct a research internship in Germany.

2016 **Abhyast Scholarship**, *The Boeing Company, USA & IIT Kanpur*
Awarded to 4 undergraduate students to design a robotic system for disaster management.

2012 **Kishore Vaigyanik Protsahan Yogna Fellowship (KVPY)**, *DST, Govt. of India*
Awarded to 245 students to encourage a research career in science.

2010 **National Talent Search Scholarship (NTS)**, *NCERT, Govt. of India*
Awarded to 1000 students to pursue education in STEM.

Positions of Responsibility

Jan 2016–Mar 2018 **Team Lead**, *AUV Team*, IIT Kanpur
Achieved 2^{nd} place at national underwater robotics competition (NIOT-SAVe 2016). Organized outreach events to showcase the work and inculcate interest in underwater robotics.

Mar 2016– Apr 2017 **Coordinator**, *Robotics Club*, IIT Kanpur
Coordinated various events, workshops, and competitions for robotics enthusiasts in the university.