

Year	Degree, Board	Course, Institute	CPI/%
2015 - 2019	Graduation, BTech.	Mechatronics Engineering, Manipal Institute of Technology, KA	8.83/ ¹⁰
2012 - 2014	AISSCE, CBSE Delhi	Vasant Valley School, Delhi	95.00%

INTERESTS

Legged Locomotion, Central Pattern Generators, Rehabilitative and Assistive Devices, Nonlinear Control

ACHIEVEMENTS

- Best Rover team from Asia, 8th out of 82 teams globally at the University Rover Challenge 2017, Utah.
- Best paper presentation at the iACT-2017 conference.
- Offered INSIPIRE scholarship by DST, Government of India for top 1% score in AISSCE 2014 – Declined

EXPERIENCE

- **BioRob** Dr.Auke Jan Ijspeert, Dr.Hamed Razavi, Jonathan Arreguit
École polytechnique fédérale de Lausanne (EPFL) *January 2018 - Present*
 - **Implementation of Walking Controller COMAN Robot(COMpliant HuMANoid Platform):**

Developed a package using OROCOS RTT and ROS frameworks for simulating experiments on walking and implemented a controller for stepping, walking and active balance for the COMAN Humanoid Robot.

[OROCOS-Package Project Page](#)
[ROS-Package Project Page](#)
 - **Development of a Neuromechanical framework to study animal locomotion:**

Developed a package using ROS along with appropriate analysis tools and controllers for simulating modular tetrapoda models with neuromechanical control algorithms.

[Click here to mail me and gain access to this repository](#)

This work was supported by the Human Frontier Science Program (HFSP) for the Robotics-Inspired Biology project.
- **Program for Autonomous Robotics Lab** Dr.Sudipto Mukherjee
Indian Institute of Technology, Delhi *2017 – 2018*
 - **Development of an Underactuated Flexible Manipulator using Differential Flatness:**

Designed a 3-link and 4-link planar manipulator on MATLAB and implemented a nonlinear control theory called *Differential Flatness*, allowing the end effector on the manipulator to follow a desired trajectory with just 2 non-colinear input forces.
- **Mars Rover Manipal** Dr.Y S Upadhyaya
Manipal Institute of Technology, KA *2015 - 2017*
 - **Development of a Mars Rover Prototype:**

Developed a Mars Rover prototype that flaunts a modified rocker-bogie suspension, low pressure balloon tires, custom designed scientific testing mechanism, 6-DOF Robotic Arm and can run autonomously. It can traverse harsh Martian like terrain and steep gradients of approximately 1m height.

 - * Stood 8th out of 82 teams at the URC 2017.
 - * Best Rover team from Asia.
 - **Robotic Arm Lead:**

Design a 6 DOF Robotic Arm with a payload of 10kgs to conduct tasks similar to those performed by the Curiosity Rover, such as screwing/unscrewing, drilling, pick and place, etc.

- **Design of a Self-Adapting Linear Jawed Gripper for a Mars Rover Prototype:**

Design a self adapting gripper as an end effector to the robotic arm assembly on the mars rover prototype. The gripper should be able to grasp objects of 8cm width, 10kg weight and have minimal number of actuators.

[Self adapting linear gripper](#)

PROJECTS

- **QuantSoftware Toolkit:**

Open source python library for financial data analysis and machine learning for finance.

- **Github Visualization:**

Data Visualization of Git Log data using D3 to analyze project trends over time.

- **Recommendation System:**

Music and Movie recommender systems using collaborative filtering on public datasets.

- **Mac Setup:**

Book that gives step by step instructions on setting up developer environment on Mac OS.