

Vaibhav Jain | Curriculum Vitae

Cluster Innovation Centre, University of Delhi

+91 9650159152 • vabsweb@gmail.com
https://github.com/Vab-jain/

Undergraduate IT engineer completing the second year of a bachelor's degree. Passionate about Robotics, ML and AI, with strong Responsible, Initiative, and Teamwork skills for working in a team and successfully completing a project.

Education

Academic Qualifications

- Cluster Innovation Centre, University of Delhi** **New Delhi**
B.Tech in Information Technology and Mathematical Innovation, minor in Embedded Systems 2016-2020
79.8% (Upto 4th Semester)
- Kiddy's Corner Public School** **Gwalior**
91.6% in 12th [PCM], 9.2 CGPA in 10th -2015

Notable Projects

- An Innovative approach to Neural Machine Translation:** Jan 2018 - Mar 2018
Processing sequential data of variable length is a major challenge in a wide range of applications, such as machine translation. This project aims to improve the state-of-the-art models for language translation using a novel FS-RNN model approach.
- Swarm Robotics:** Dec 2017 - Feb 2018
The project involved multiple robots cooperating to fertilize the plants and remove the weeds in a farm. The challenge is to collaborate and complete the fertilization and de-weeding using an attached robotic arm in the most efficient manner. Used FIREBIRD V and SPARK platform. Also includes designing attachments for these robots.
- Gesture Controlled Robotic Arm:** May 2017 - Aug 2017
Developing a user-friendly interface through the gesture recognition using Kinect 3D camera to control a robotic arm. The robotic arm will try to mimic the motion of the user's arm motion. It allows the fluid movements of robotic arm possible in real-time.
- Trajectory Planning and its Application on Robotic Manipulator:** Feb 2017 - Apr 2017
This was an academic project on study of the Trajectory planning algorithms used in modern Robotic Manipulator Arms and application of Partial Differential Equations in the path planning.
- Advanced Maze Solving Robot:** Aug 2016 - Oct 2016
Designed a two-wheeled Differential Drive Mobile Robot to solve maze of complex network of lines having curved or sharp turns. Our robot beat the time-record of one of the best commercial Pololu 3pi line following robot. Optimized the Design, built PCB and it's Fabrication.
- Stock Management App [ongoing]:** Feb 2018 - Present
This is an app designed for stock management, product display and creates stock issue record for Autonomi, the robotics society of Cluster Innovation Centre, University of Delhi. Currently in BETA testing.

- **Amazon Product Recommendation System using R:** *Mar 2018 - April 2018*

The project aims to create a machine learning model which will perform sentiment analysis on product reviews given by buyers on Amazon and present the user with a 'review-score'. The ML model will help the user to make a more informed choice.

Work Experience

- **Summer Research Intern** **New Delhi**
Cluster Innovation Centre, University of Delhi *Jun 2018–Jul 2018*

Worked under Asst. Prof. Sachin Kumar at Cluster Innovation Center. The project was aimed at Developing a vanilla Operating System Kernel from scratch. Includes writing Shell, Bootstrap, BootLoader, I/O routines in 16-bit mode and 32-bit protected mode for x86 platforms.

- **Workshops**

- *Various Colleges in Delhi*

Given various workshops on Introduction to Robotics and Introductory Robotics Projects.

- **Summer Research Intern** **New Delhi**
Cluster Innovation Centre, University of Delhi *Jun 2017–Jul 2017*

Worked under Prof. Shobha Bagai at Cluster Innovation Center. The project was aimed at creating a robotic arm capable to mimic a human arm's motion using Kinect Sensor to generate 3D map of the user's environment.

- **Mentor at CRIP**

- *CRIP - CIC Robotics Internship Programme* *Jun 2018 – July 2018*

CRIP is an initiative by Autonomi to enable budding roboticists to work on projects under the mentorship of experienced students/ faculty/ industry persons in the field of Robotics.

Technical and Personal skills

- **Programming Languages:** Proficient in: C, C++, Python, Embedded C
Also familiar with: Java, Matlab, R, Mathematica.
- **Industry Platforms:** Arduino, Tensorflow, Matlab, LTspice, CPUsim, FIREBIRD.
- **Operating System Platforms:** Linux, Windows, ROS
- **Other:** Good presentation skills. Work well in a team. Good management and writing skills. Competent in writing well organized and structured reports.

Position of Responsibility

- **Project Manager** at Autonomi, the Robotics society at Cluster Innovation Centre since January 2017. My position as "Project Manager" requires me to get involve with every project ongoing under Autonomi and review their progress. I also help them gathering financial as well as intellectual resources.
- **Organizing Member** of ROSPy Jam: meet-up aimed for people working with either ROS or python or both.

Interests and extra-curricular activity

- **Interests:** Music Theory, Gaming
- **Activities:** Piano, Football