

YASH SAHIJWANI

ACADEMIC PROFILE

Degree/Certificate		Institution				Percentage/CGPA	Year
B-Tech		Electronic Engineering IIT (BHU), Varanasi				9.77	2023
Sem I	Sem II	Sem III	Sem IV	Sem V	Sem VI	Sem VII	Sem VIII
9.79	9.80	9.65	9.83	-	-	-	-
CBSE (XII)		Army Public School, Noida				93.60	2019
CBSE (X)		Army Public School, Noida				95.00	2017

SKILLS

Programming Languages: C, C++, Python

Tools and Frameworks: Keras, Tensorflow, OpenCV, Arduino, PyBullet, Matplotlib, Stable Baselines, Git, Ubuntu, Windows

Areas of Interest: Deep Learning, Computer Vision, Reinforcement Learning, Robotics, Competitive Programming, Data Structures and Algorithms

PROJECTS

Deep RL Based Controller for 2 wheeled robot

Jan. 2021 - Apr. 2021

Exploratory Project under Dr. Sanjeev Sharma

- Developed a robust controller for self balancing and locomotion of a 2 wheeled robot in simulation using Deep Reinforcement Learning.
- The controller was trained using the DQN (Deep Q Networks) algorithm, and the robot was successfully able to accomplish the required tasks.
- The problem of making the 2 wheeled robot move forward and backward was solved by further training the policy learnt for self balancing, thereby reducing the time and computational resources required for it. [GitHub](#)

Intelligent Pick and Place Robot

Jul. 2020 - Jan. 2021

Flipkart Grid 2.0 Robotics Challenge

- Developed a vision based intelligent pick and place industrial robot in simulation to pick and place various household items in a warehouse like setting.
- The robot was able to detect objects in an arena using the YOLO (You Only Look Once) algorithm and the gripper was able to predict correct grasps by using a Generative Residual Convolutional Neural Network. These were the two aspects of the software pipeline.
- The hardware design of the robot was inspired by a 3D printer and was robust enough to efficiently move around in a large workspace [GitHub](#)

Captcha Solver

Mar. 2020 - Apr. 2020

Mosaic '20

- Built a Convolutional Neural Network (CNN) using tensorflow and keras to recognize captchas, with different orientations and thickness of letters and numbers along with noise in the form of lines and dots.
- The model architecture was trained on the EMNIST by class dataset.
- OpenCV and SciPy libraries were used for removal of noise from the captcha as well as segmentation of letters. [GitHub](#)

POSITION OF RESPONSIBILITY

- Co-Coordinator, Robovation, Technex '21** - Formulated the problem statement for the event under Technex, the Techno-Management fest of IIT-BHU with participation of colleges from all over India.
- Co-Coordinator, Cassandra, Udyam '21** - Facilitated the smooth conduct of the data science event, and approached companies for sponsorship.
- Co-Coordinator, Vision 2.0, Robotics Club** - Collaborated to build the virtual arena for the Robotics event, and advised on the technical aspects of the problem statement.
- Co-Coordinator, Imaze '21, Robotics Club** - Built the virtual arena, and mentored freshers to help them solve the problem statement.

HONOURS AND ACHIEVEMENTS

- National Finalist** (top 9 teams out of 2000), Flipkart Grid 2.0 Robotics Challenge
- Winner of Mosaic '20**, a Deep Learning and Computer Vision event, Udyam '20 (IIT-BHU).
- Secured **2nd position in Cassandra '21**, a Data Science event, Udyam '21 (IIT-BHU).
- Secured **1877th** place out of 9000+ teams, in Google Hash Code 2021.
- Secured **240th** place out of 12000+ participants in Codeforces Round 725 (Div. 3)
- Participated in **Agrobot Design Innovation Challenge** in Inter IIT 2021
- Secured a rank of **2242** in JEE Advanced '19
- Secured a rank of **820** in JEE Mains '19

EXTRA-CURRICULAR ACTIVITIES

- An active member of the ML group of the **Club of Programmers, IIT(BHU)**
- An active member of the **Robotics Club of IIT-(BHU)**
- Worked on research projects under **RoboReG (Robotics Research Group) IIT(BHU)**
- Actively participated in Competitive Programming contests
- Codeforces Handle: [DifferentiableModulo](#), Max Rating: 1761
- CodeChef Handle: [terabyte17](#), Max Rating: 2023 (5*)

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