



# ANMOL AGARWAL

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## EDUCATION

**Manipal Institute of Technology**  
Bachelor's in technology  
Computer and Communication Engineering  
**Delhi Public School Rajnagar**  
Grade 12<sup>th</sup>  
PCM + Computer Science

*Manipal*  
*2019 - Present*  
*CGPA: 8.78/10*  
*Ghaziabad*  
*2019*  
*93.75%*

## EXPERIENCE

### FOO Solutions

*July 2021 - Present*

*Java Backend Intern*

- Working on the server-side of TAMAM, a micro-lending platform, aimed at increasing financial inclusion in Saudi Arabia.
- Involved in creating various REST APIs and their integration with various third parties using Spring Boot.

### Mars Rover Manipal

*Oct 2019 – May 2021*

*Artificial Intelligence Member*

- Developed an autonomous traversal and search algorithm for a Mars Rover for searching AR tags and reaching them.
- Developed an application using network sockets and OpenCV to retrieve real-time video feed from the rover.
- Implemented visual odometry using various cameras like RealSense and Zed Cam.
- Implemented a Real Time Kinematics GPS module for precision localization

## PROJECTS

### Self Submitting Form

*2021*

Developed a web app that triggers the deadline timer as soon as logged-in and submits automatically in database when timer elapses without using asynchronous programming. Used NodeJs, ExpressJs, CSS, HTML and MongoDB.

### Pick and Drop Drone

*2020*

Simulated an autonomous drone on ROS Gazebo, that delivers packages to desired locations and implemented an algorithm for delivery and returns scheduling, in the most efficient manner. Also, implemented a Harr Cascade classifier for detection of the landing pad.

### Tennis Ball Detection

*2019*

Developed a robust custom algorithm to detect tennis balls in harsh lighting conditions. Used various classical techniques in OpenCV to achieve the expected detection.

## ACHIEVEMENTS

- Secured **2<sup>nd</sup> place** in SMVITM IEEE hackathon by creating a web app called **DigitalDukaanDaar**.
- Contributed to the team that stood **2<sup>nd</sup> in Asia and 7<sup>th</sup> in worldwide** in the University Rover Challenge 2020 held in the Utah, USA.
- Secured the **3<sup>rd</sup> position** worldwide in International Mars Hackathon 2020.
- **Top 10** among 400 teams across India in E-Yantra Competition 2020 conducted by IIT Bombay.

## POSITION OF RESPONSIBILITY

- Project Lead, European Rover Challenge 2021, managed 30 undergraduate students and secured **7<sup>th</sup> position worldwide** for Preliminary Design Report.
- Mentored more than 80 undergraduate students for Mars Rover Manipal AI Team 2021.

## TECHNICAL SKILLS

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<b>Programming</b>	C++, Java, Python, SQL, CSS, HTML, C, BASH
<b>Libraries &amp; Tools</b>	Node, ExpressJS, MongoDB, Git/GitHub, Spring, ROS, NumPy, Scikit
<b>Hardware</b>	3D Lidar, Stereo cameras, GPS, IMUs, Arduino, RPi
<b>Experienced in</b>	Web Development, Robotics, Linux