



# Harsh Ajay Rana

Roll Number: 190121013  
B.Tech - Engineering Physics  
Indian Institute of Technology Guwahati

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## Education

Year	Degree / Certificate	Institute / Board	CGPA/Percentage
2020 - Present	B.Tech	Indian Institute of Technology, Guwahati	8.67 (Current)
2019	Senior secondary	HSC board	87%
2017	Secondary	ICSE board	94.83%

## Projects

- **NUCLEUS(New understanding of the Conditions for Life Based Experiments up in Space) The Biosatellite Program**  
*Aim:* To launch a 1U **CubeSat** equipped with a live specimen to space. *Ongoing*
- **FPV(first-person-view) Drone**  
Developed a **Quadcopter** that can be flown through the pilot's view. (*using a camera onboard*) *June 2019*
- **Remotely controlled car**  
Developed a RC car with Ackermann mechanism using Arduino. *Nov 2019*
- **Solar-powered lamp**  
Developed a solar lamp that can detect sunlight and automatically orient itself for the generation of electricity. *Nov 2019*
- **Remotely controlled plane** *Nov 2019*

## Technical skills

- **Programming languages:** C, Python
- **Web technologies:** HTML
- **Database management:** MySQL
- **Miscellaneous:** Arduino
- **Operating system:** Windows, Linux

## Experience

- **Inter Hostel Technical competition (Kriti)**  
Built Arduino based projects. *Nov 2019*
- **Inter Hostel Cultural competition (Manthan)**  
Participated in the photography team and photo walks. *Jan 2020*

## Achievements

- **JEE Advanced/mains 2019:** Secured All India Rank 4971 among 10lakh candidates appearing for the test.

## Key courses taken

- C Programming
- Engineering Mechanics
- Engineering Drawing
- Electronics
- Mathematics
- Physics
- Chemistry
- Biology

## Extracurriculars

- **Python for Everybody specialization:** By University of Michigan on Coursera.
- **Deep Learning course:** By IIT Madras professors on GUVI.
- **SolidWorks workshop:** Attended a 2-day workshop on 3D modeling.
- **Ngspice workshop:** 1Day workshop on basic Ngspice code and IC design.
- **Lightroom:** 1Day workshop on photo editing.
- **Android App Building:** 2Day workshop building basic apps in Java.