

# Amegh Bhavsar

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B-405, LBS Hall of Residence, IIT Kharagpur, W.B., India - 721302

## Education

### INDIAN INSTITUTE OF TECHNOLOGY KHARAGPUR

Dual Degree in Biotechnology and Biochemical  
Engineering | Sophomore  
Expected April 2020 | Kharagpur, India  
CGPA: 7.51/10.00

### VIDYASAGAR SCHOOL

All India Senior School Certificate Examination  
Grad. May 2015 | Indore, India  
Percentage: 88.0%

## Links

LinkedIn://ameghbhavsar

Github://ameghbhavsar

## Courses

### UNDERGRADUATE

Programming and Data Structures\*  
Partial Differential Equations  
Probability and Statistics  
Basic Electronics\*  
Biochemistry\*  
Biochemical Reaction Engineering and  
Bioenergetics\*  
Microbiology\*  
Cell and Molecular Biology\*

### ONLINE

Introduction to Programming with MATLAB (Coursera)  
Intro to Computer Vision (Udacity)  
The Arduino Platform and C programming (Coursera)

## Expertise

### PROGRAMMING LANGUAGES

C, C++, MATLAB, Python, C#, MySQL, HTML, CSS

### TOOLS & LIBRARIES

OpenCV, Git, Socket Networking

### SOFTWARES

Adobe Photoshop, Atmel Studio

### HARDWARES

Arduino, ATmega

## Co-curricular Activities

Artist | Badminton

## Projects

### SWARM ROBOTICS, IIT KHARAGPUR | Software Team Member

Mar 2016 - Present | Kharagpur, India

**Guide:** Prof. Somesh Kumar, Prof. Pallab Dasgupta

- Worked on designing networking architecture for Swarm Robots in C.
- Accomplished localization of robots using AprilTags library in C++.
- Worked on obstacle avoidance algorithm for swarm robots to travel freely in an arena mapped through overhead camera.
- Designing Leader selection and Clustering algorithms for swarm model.
- Designing a software architecture which can implement swarm model on any type of terrestrial or aerial robot.

### FOOTBALL COMPUTATION USING OpenCV | Project Member

Dec 2016 | Kharagpur, India

- Attended IEEE certified workshop on Image Processing.
- Learnt basics of color channels, filtering, edge detection, object detection and tracking, and feature extraction techniques like Hough transform.
- Accomplished IEEE certified project of computing number of people in a room using OpenCV in C++.

### MOTION MIMICKING AND PATH REPLICATING ROBOT | Project Member

Dec 2016 | Kharagpur, India

- Attended IEEE certified workshop on autonomous robotics.
- Learnt design and mechanism of different types of robots.
- Gathered understanding about working and use of various integrated circuits, sensors, and actuators.
- Learnt concepts of microcontroller programming and applied them on ATmega 16 using Atmel Studio.
- Accomplished IEEE certified project aimed at making an autonomous robot which could imitate the path of another robot on ATmega and Arduino.

## Positions of Responsibility

### GOPALI YOUTH WELFARE SOCIETY | Senior Executive Member

#### Design Team Member

Aug 2015 - Present | Kharagpur, India.

- Responsible for all designs related to social media accounts and the website.

#### Media and Publicity Team Member

Jan 2016 - Present | Kharagpur, India

- Handling social media accounts, contacting renowned newspapers, Facebook pages and websites for coverage.
- Accountable for making Annual Report 2016-17 of the organization.

#### Other Responsibilities

- Working for financial support of students from poor background under the initiative Educate a Child.
- Part of the team responsible for raising an amount of Rs. 2.5 Lakh in Jan, 2016 for a free school run by Gopali Youth Welfare Society.