



Abhay Sheel Anand

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EDUCATION

BHARATI VIDYAPEETH'S COLLEGE OF ENGINEERING

B.TECH, ELECTRONICS AND
COMMUNICATION ENGINEERING
2016-2020 (anticipated) | New Delhi
Cum. CGPA: [8.01](#)

VIKAS BHARATI PUBLIC SCHOOL

AISSCE, CBSE BOARD (XII) PCM
Grad. 2015 | New Delhi, India
Percentage - [93%](#)

LINKS

WEBSITE:// [abhaysheelanand](#)
LINKEDIN:// [abhaysheelanand](#)
GITHUB:// [abhaysheel](#)

PERSONAL DETAILS

Father's Name: Dharamavir Singh
Mother's Name: Rekha Rani
Sex: Male
Nationality: Indian
Marital Status: Single

COURSEWORK

TRAINEE

Cyborg labs: [06/2017-07/2017](#)

- Embedded Systems
- Introduction to PCB designing
- Robotics

COURSE

Udacity/BVPIEEE-CS : [01/2017-03/2017](#)

- Machine Learning and AI

SKILLS

GENERAL

Time Management • Debugging •
Innovative and Minimal Approach •
Curiosity • Reciprocating Knowledge

TECHNOLOGIES

Robotics and Embedded Systems •
ROS(Robotics Operating System) •
Neural Networks and Deep Learning •
Serial Communication • Signal
Processing • Digital Image Processing •
Internet of Things • 3D Modelling

RESEARCH INTERESTS

ROBOTICS, EMBEDDED SYSTEMS, DEEP LEARNING, VLC, MOBILE
COMPUTING, IOT

EXPERIENCE

BOTLAB DYNAMICS | IIT DELHI | EMBEDDED ENGINEER

[12/18](#) - [03/19](#) | New Delhi

- Developing swarm system for drones.

IIT DELHI | VISIBLE LIGHT COMM. | RESEARCH INTERN

[03/18](#) - [08/18](#) | IIT Delhi

- Analysis of the MAC layers in Visible Light Communication in NS3(Network Simulator).
- Building the complete NS3 module for Visible Light Communication.

RESEARCH

ANALYSIS OF MAC LAYERS ASSOCIATED WITH VLC IN NS3 AND MATLAB

M. Bhutani, [AS Anand](#), B. Chhaglani, A. Arora, A. Rao

The implementation of MAC layer on MATLAB and NS3 has been
successfully done and various results related to throughput, delay and
performance has been studied. Along with building modules for the same.

"PLUGFREE" AUTONOMOUS CHARGING OF DRONES. (SPONSORED BY GSU, USA)

A. Ashok, N. Garg, [AS Anand](#), R. Ahuja

An autonomous solution for the problem concerning the low battery life of
drones. Includes building a external electronic module prototype.

RESEARCH PUBLICATIONS

AN INNOVATIVE PASSIVE INDOOR LOCALISATION AND NAVIGATION APPROACH, INDIACOM 2018

[AS Anand](#), B. Chhaglani, S. Garg, J. Singh

AWARDS

1ST POSITION: [EYANTRA 2018](#)

[03/2019](#)

Secured 1st position in eYRC-2018 National Robotics Competition held
at IIT Bombay under the theme Pollinator Bee. Top 6 teams were
selected as finalist from 44 teams across the country. Whole theme was
based ROS framework.

WINNER : [SMART INDIA HACKATHON 2019](#)

[03/2019](#)

Winner of SIH 2019 in Amadeus Software Labs theme. Amadeus Software
Labs offered two problem statements one of which was "Use
Augmented/Virtual Reality (AR/VR) to enhance travel experience of
customer", the solution was proposed for the same.

PROGRAMMING

Proficient

Python • C • Embedded C/Arduino • Blender • Android

Mediocre

MATLAB • VHDL • XML • TCL • Assembly • OpenCV(Library) • Tensorflow(Library) • Keras(library)

Familiar:

C++ •

HARDWARE

Raspberry Pi 3B • Arduino Boards • Firebird V • XBees 2.4C • CC3D Flight Controller • Texas Instruments MSP-430 • ATmega16 MCU

SOFTWARE

Arduino IDE • Unity • ROS(Robotics Operating System) • Blender • Proteus • XCTU • Wordpress • Audacity • Libre Pilot • Orcad Capture • AVR Studio • Atmel Studio • Adobe Photoshop CS6 • Processing • GNU Sim8085S • Mentor Graphics Pyxis • Mentor Graphics QuestaSim

LANGUAGES

- Hindi(Native Proficiency)
- English(C1 Proficiency)

ACTIVITIES

CO-CURRICULAR

RAS SB IEEE BVCOE |Chairperson
08/18 – Now | New Delhi

RAS SB IEEE BVCOE |Research and Development Head
08/17 – 07/18 | New Delhi

EXTRA-CURRICULAR

Design and Event Manager at The Sports Society, BVCOE •
Photographer • Graphics Designing volunteer

VOLUNTEERING

Core cultural volunteer at BVCOE-NSS(National Service Scheme)

HOBBIES

Going on random nature photo shoots • Travelling • Astronomy enthusiast • Playing Table Tennis •Swimming • Running • Making •Sketching • Watching Science Fiction

IST POSITION: HACK-A-BIT

10/2018

First position at Hack-A-Bit, BIT Mesra, for developing a novel assistant system for deaf and mute individuals within 36 hrs.

WINNER :EV HACKATHON:INDIA-AUSTRALIA JOINT INITIATIVE

08/2018

EV Hackathon organised by ChargePoint+, New Nexus Energy, California clean energy fund. Build an innovative solution in simplifying electric charging procedure. [Youtube-link](#)

PROJECTS

DRONE TO DRONE VLC

Ongoing

Drone swarm robotics using visible light communication and ROS(Robotics Operating System).

TRAVEL YA(AR)

03/2019

An SDK platform for travel agency apps e.g. MakemyTrip to book the sports stadium seats interactively using augmented/virtual reality technology.

HANDY: PERFECT ASSISTANT FOR DEAF N MUTE

10/2018

An assistant consisting of an integrated system for proper deaf and mute conversation in daily life along with smart alert system.

TOURISTANT

07/2018

A positioning-system that guides and assists tourists at tourist destinations using Received Signal Strength Indicator triangulation mechanism.

SFA:SMART FARMING ASSISTANT

03/2018

A system that makes farming crop-oriented. It sows seeds, analyses the field sectionally and accordingly provides water and fertilizers.

CHASER DRONE

01/2017

A drone that chases away all kind of animal from the agricultural farm using ROS(Robotics Operating System) and Computer vision(Open CV).

PLANTER BOT

11/2017

A bot that traverses an area using raspberry pi and picam and responds to various colors and shapes in that area.

MENTORS

1. DR. SARITA AHLAWAT

BIRAC BIG INNOVATOR, TBIU, IIT-DELHI

Email Address: sahlawat@gmail.com

2. DR. ASHWIN ASHOK

ASSISTANT PROFESSOR, GEORGIA STATE UNIVERSITY

Email Address: aashok@gsu.edu