

ANKUR BHATIA

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RESEARCH INTERESTS

Deep Learning, Robotics, Computer Vision

TECHNICAL AND PERSONAL SKILLS

Computer Languages	C/C++, Python.
Technologies & Frameworks	Tensorflow, Keras, OpenCV, ROS, Git, Linux, Microcontrollers.
General Business Skills	Good presentation and marketing skills, works well in a team.

PROFESSIONAL EXPERIENCE

Winter Robotics Intern *December 2019 - Present*
Robita Lab, IIIT Allahabad; Advisors: Prof. G.C. Nandi

- Working on Human Emotion Recognition for Nao humanoid robot. Multi-modal classification and context recognition using deep learning on real time text, audio and video.
- Testing latent modelling using Variational Autoencoders for audio representation. [LINK](#)

Summer Research Intern *June 2019 - August 2019*
Research Intern at IIT Delhi, Celestini Program India
Advisors: Dr. Aakanksha Chowdhery (Google Brain) and Prof. Brejesh Lal

- Calibration of cheap MQ135 (for CO₂) and DSM501A (for PM_{2.5}) sensor with an accurate ground truth sensor for easy air quality monitoring.
- Time Series forecasting on real time data with a fully functional pipeline of detection of the nearest CPCB station from the user, and providing predictions for Personal Air Quality Monitoring. [LINK](#)

PROJECT EXPERIENCE

Eyantra Robotics Competition - Autonomous Bot - IIT Bombay *October 2018 - Mar 2019*

- Control of Autonomous bot including Robot chassis Designing, Raspberry Pi, Arduino, Color Image Processing, ArUco Detection and Path Planning.
- Design of Robotic Arm and stacking mechanism for pick, place and stacking.
- Implemented FSM and PID feedback control algorithms for accurate line following. [LINK](#)

Vision Based Pedestrian Detection using Thermal Camera, UIET,PU *Dec 2018 - Mar 2019*

- It includes dataset collection using FLIR Infrared Camera in different weather conditions, people, clothes, time, etc.
- Transfer learning is used to train Fast-RCNN model for accurate detection. [LINK](#)

Autonomous Waste Management Robot

World Robot Olympiad (India Stem Foundation) - Kolkata, India *Aug 2016 - Nov 2016*

- Designed a recycling plant robot that collects and segregates the waste into its respective containers using LEGO Mindstorms NXT.
- Includes line-following, color detection, actuator designing. [LINK](#)

POSTER PRESENTATION AND ABSTRACT SUBMISSION

Line Following Robot using Finite State Machine. - Chandigarh Science Congress 2019 (CHASCON)
Pedestrian Detection Using Thermal Imaging. - Chandigarh Science Congress 2019 (CHASCON)

EDUCATION

UIET, Panjab University

Bachelor of Engineering, Electronics and Communications

Aug 2017 - Present

CGPA: 9.23/10

ONLINE AND OFFLINE COURSES

Secure and Private AI Scholarship (Udacity), Deep Learning Specialization(Coursera), Aerial Robotics (UPenn - Coursera), Introduction to Embedded Systems Software and Development Environments(Coursera), Machine Learning with Python and R (Udemy).

QIP course on "Robotics and Autonomous Systems" IIT Kanpur (1st to 5th April 2019).

LEADERSHIP AND MENTORING EXPERIENCE

Mentor - Learn IT Girl

March 2019 - June 2019

Mentored a final year undergraduate student in successfully completing of a project on Sentiment Analysis on Twitter data. The main aim of this program is to help the girl student from anywhere on the globe to learn a programming language through a project.

Dell Campus Ambassador

Nov 2018 - Dec 2019

To represent and market for Dell in campus, carry out various activities to indulge people realize their passion and showcase to the world on Dell-Futurist platform. Presently in top 5 candidates in India.

Software Freedom Day

Sept 2018 - present

Co-Organiser and Speaker at Software Freedom Day, Panjab University with a good record in marketing of the event. Brought MSI, Balsamiq, RedBull as our key sponsors.

Boys Hostel Indoor Sports Secretary

2018 - present

To carry out regular indoor sports activities like Table Tennis, Badminton, Carrom and Chess.

Programming Club Community

2018 - present

Tutoring concepts of Machine Learning, Deep Learning and Hardware Programming to junior students. Currently we are a telegram community of 600+ people.

PERSONAL AND EXTRA CURRICULAR ACHIEVEMENTS

Winner Ennovate Competition

Nov 2019

Ennovate is an Innovation based competition being organized by GrowVation and DIC, Panjab University. It involved building of an idea into a prototype and to pitch the idea in front of jury from various domains.

National Service Scheme (NSS) Volunteer

Volunteering for the service of nation, helping the old, ensuring cleanliness, discipline in life, regular exercise and creating awareness with the motto of "NOT ME BUT YOU".

Circuit Design Competition

Bagged First Prize in 30 minute Circuit making competition in The Annual Academic Fest - 2019, Physics Department, Panjab University. Built optical communication of bits using 555 timer IC and Light Dependent Resistor.