

# MOHAMMAD ANWAR MANJANOOR

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## EDUCATION

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Sahyadri College of Engineering & Management, Mangalore Aggregate: 68(100)  
(Affiliated to **Visvesvaraya Technological University**, Belagavi, India)

**BE, Electronics and Communication Engineering (EC)**, Aug 2012 - June 2016

- *Founder of Aeromodelling and Robotic Club of the Institute named "CHALLENGERS"(2013)- Presently has 60 active members*
- *Participated in various National and International level Aeromodelling (Conducted by Boeing and SAE International) and Robotic competitions (by Indian Institute of Technology(IIT's) and National Institute of Technology(NIT's))*
- *Team Coordinator, Google student Ambassador Program of the campus(2014)- Organized two day Android App Development Workshop*

St Aloysius Pre-University College, Mangalore, June 2010-March 2012 Aggregate: 83.8(100)

## RELEVANT WORK EXPERIENCE

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**SAHYADRI COLLEGE OF ENGINEERING & MANAGEMENT, Mangalore**

*Project Coordinator* *Aug 2016 – Present*

- Team Secured 2<sup>nd</sup> position in Oral presentation of SAE International Aerodesign West (2017) held at Lakeland, Florida under micro class category.
- Mentored team to Participate in 3 International Aeromodelling and Robotic competition in 5 different categories held at USA (2017).
- Organized a two day National Level Aeromodelling competition "AEROPHILIA 2017" witnessing 600 participants from all over India.
- Visited NASA Ames research center Mountain View, California (2017) and was escorted to Vertical motion Simulator (VMO), 360-Degree Virtual Air traffic control tower and Boeing 747 simulator.

## ACADEMIC PROJECTS

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*Unmanned Aerial Traffic Management system, Wireless Networking and Control Theory* *August –June 2016*

- Managing low altitude autonomous multiple slave quadrotors to a confined airspace, monitored by a high altitude master fixed wing aircraft
- Demonstrated effective communication between the multiple slave quadrotors using Xbee, data was successfully transferred to the ground station via master aircraft. Received a score of 190(200) in the semester examination.

*Unmanned VTOL system, Wireless Networking* *January-September 2016*

- Designed a multirotor capable of vertical takeoff, navigating to the waypoints and land in the user defined point completely autonomous.
- Developed using 3DR Pixhawk flight controller, GPS and Optical flow sensor with multirotor frame.

*Intruder Detector, Microcontroller* *December- May 2013*

- Developed a system, which detects the intruders into a house and sends a text message to the house owner.
- Demonstrated using Arduino UNO microcontroller, PIR motion sensor, GSM module. Received 3<sup>rd</sup> prize in the college technical fest.

*Camera Surveillance system to detect unattended babies in a vehicle, Image processing* *April-December 2016*

- System detects the unattended child in a vehicle, and calls the driver, alerting the baby in distress
- Implemented using Raspberry Pi3 microprocessor and image processing using OpenCV and a CMOS camera. Worked under professor Dr. Steven Lawrence Fernandes, from EC and Hong Lin, Computer Science and Engineering, University of Houston Downtown, USA

*Emotion detecting application, Software Engineering* *November 2012*

- Basic app developed for Windows store using Microsoft Visual studio(C#), which quotes based on the users emotion.

## TECHNICAL SKILLS

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- **Operating Systems:** Unix, Linux, Windows 98/2000/XP, Raspbian
- **Programming Languages:** C/C++, VHDL, HTML
- **Softwares:** Matlab (Simulink), XFLR5 (Model aircraft design & performance testing), Arduino, OpenCV, Eagle (PCB & Schematic software), Microsoft Office, Microsoft Visual Studio 2010
- **Micro controller/processores:** Arduino UNO/DUEMILANOVE/DIECIMILA/REV, Raspberry Pi, Parallax Propeller
- **Radio controlled fixed wing aircraft and rotorcraft design and flying**
- **Printed Circuit board (PCB) design**

## ACHIEVEMENTS, RECOGNITIONS & HONORS

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- **First Prize:** Drill droid Robotic challenge held at Indian Institute of Technology(IIT) Kharagpur as part of National students Space challenge(2013)
- **Second Prize:** Aeromodelling competition held at Indian Institute of Space Science and Technology(IIST), Trivandrum in their annual Techfest, Conscientia(2014)
- Story titled "**Quest to dream and acquire knowledge**" published as one of the inspiring, among the 50 stories of undergraduate students of India in the book "**SHAPE IT**" authored by Dr. Subramani and Ms. Vajjyanthi S (2017).

- **Merit-cum-Means scholarship** throughout the Bachelors program at Sahyadri college of Engineering & Management (2012-16) from ministry of minority affairs, Govt. of India
- Received **Best Alumni Award** from St Mary's English medium high school, Kerala for successful participation in National and International competitions (2015).
- Received **Best student of the department during Undergraduate studies** award for successful participation in SAE International Aerodesign 2016 and securing fourth position in Oral presentation of micro class category.

#### EXTRA-CURRICULAR

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- Conducted workshop on Aeromodelling and Robotics, for children's (10-18yrs) in Kasaragod and Dakshina Kannada district during third and final year of Engineering (2015-2016).
- Event Coordinator for Two day National Level Aeromodelling competition named 'Aerophilia 2016' during final year of engineering (2016).
- Trained 3 students for flying Radio controlled fixed wing aircrafts and rotorcrafts during third year of Engineering (2014)
- Attended INK Live 2015 as a part of Google students Ambassador Program
- Worked on Line Follower Robot, All terrain Vehicle robot, Accelerometer controlled robot, Hovercraft, Water robot and Water rocket

#### PUBLICATIONS AND PATENTS

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- Inventor of the Indian Patent "System and Apparatus for climbing up a tree to perform various tasks", Application No.847/CHE/2015 A, dated 26 August 2016 page number 61995(Also filed as applicant and awaiting the change) ([http://www.ipindia.nic.in/writereaddata/Portal/IPOJournal/1\\_359\\_1/part3.pdf](http://www.ipindia.nic.in/writereaddata/Portal/IPOJournal/1_359_1/part3.pdf))
- Presented the paper titled "*Simultaneous fusion and Denoising of bone - vessel information via PCA based fusion*" at Society for Design and Process Science 2016 held at Rosen college of Hospitality Management, Orlando Florida,USA. (<https://sdpsnet.org/sdps/documents/sdps2016/proceedings%20SDPS%202016.pdf>)
- Authored and awaiting publication of the paper titled "*Pattern structure employing Quad-rotor in Indoor and outdoor Environment*" in IEEE Intelligent systems journal.