Arnab Karmakar

Curriculum Vitae

"You have to dream before your dreams can come true."
A.P.J. Abdul Kalam

Education

2015–2019 **B.Tech in Avionics**, *Indian Institute of Space Science and Technology (IIST)*, Kerala, India.
CGPA – 8.36

2013–2015 **High School**, *Jenkins School*, West Bengal, India, *Percentage – 95.4*.
Ranked 20^{th} in State Board

Experience

2017,Jan – 2017,Feb **Investigation of PSLV C36 VIS Satellite Separation Images**, ISRO-IIST PROJECT, Vikram Sarabhai Space Center and Indian Institute of Space Science and Technology.
Under Dr.Deepak Mishra and team, Department of Avionics, IIST
Analysing PSLV Separation Images of RESORCESAT-2A to draw conclusions about the unidentified objects seen in images.
- Worked with various segmentation algorithms.
- Learned and implemented object tracking algorithms.

2016,August – Present **Vyom Mark-II**, STUDENT ROCKET PROJECT.
Vyom mark-II is the esteemed second version of the first Vyom (Asia's first successful student rocket project). Currently working on the payload subsystem and electronics.
- Developed a Graphical User Interface (GUI) in MATLAB for real time analysis of data.
- Programmed the FPGA board for communication and monitoring system.
- Implemented data compression algorithms in MATLAB.

2016,June – 2016,July **Summer Intern**, NETTECH PRIVATE LIMITED, Indian Institute of Technology - Kharagpur.
Under Dr. Swapan Purkait, Founder Director, Nettech Pvt. Ltd.
Area of focus : network management, internet and ethical hacking. Learned about routing and network simulation. Understanding of phishing techniques and prevention measures.
- Network Simulation Using Cisco Packet Tracer.
- Developing Linux Web-Server using RedHat Linux, Webpage hosting using Apache and Webmin.
- Ethical Hacking (Specially Phishing Techniques) and prevention measures using Kali Linux.

Projects

2017, Jan. – 2017,Feb. **Real time Face Recognition using Raspberry-Pi**, IIST, Solo Project.
Developed real time Face Detection and Recognition algorithm in Python using OpenCV and implemented in Raspberry-Pi.

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2016, Sept. – 2016,Dec. **Ishihara 38 plates CVD test image transformation**, IIST, Solo Project.
Developed MATLAB code to transform images of the Ishihara 38 plates CVD test (red-green color blindness) to distinctly convey all information to color blind people.

Awards

2015-Present Department of Space Scholarship (Govt. of India)

2016 First prize in Line Follower competition, Conscientia (Annual technical festival), IIST

2015 Second prize in Glider Design, Inter College Glider Design Competition held at IIST

Computer skills

Advanced MATLAB, C, LaTeX, PSpice, MS Excel

Intermediate Python, Linux, Adobe Photoshop

Basic C++, PHP, Android Programming

Extracurricular Activities

i **Member**, Robotics Club of IIST.
- Project Work e.g. Line follower, Self balancing robot, Motion detector camera
- Conducting seminar on regular basis.
- Co-coordinator of Robotics events in Conscientia - the annual technical festival of IIST.

ii **Magic Show**, Stage Performance, IIST.
Performed Card Magic in Konchords - cultural festival, IIST

iii **Elected Class Representative**, Department of Avionics.

iv **Co-coordinator**, Finance, Dhanak, (annual cultural festival, IIST).

Communication Skills

i Learned Structural thinking

ii Two years of Engineering taught me how to cope up with different situations

Languages

Bengali	**Mothertongue**	*Bilingual Proficiency*
English	**Professional Expertise**	*Full professional proficiency*
Hindi	**Intermediate**	*Conversationally fluent*

Interests

- Robotics
- Chess
- Reading
- Card Magic
- Photography
- Cycling

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