Fr. Conceicao Rodrigues College of Engineering

TechnoEdge

DEPARTMENT OF ELECTRONICS AND COMPUTER SCIENCE

About the Department
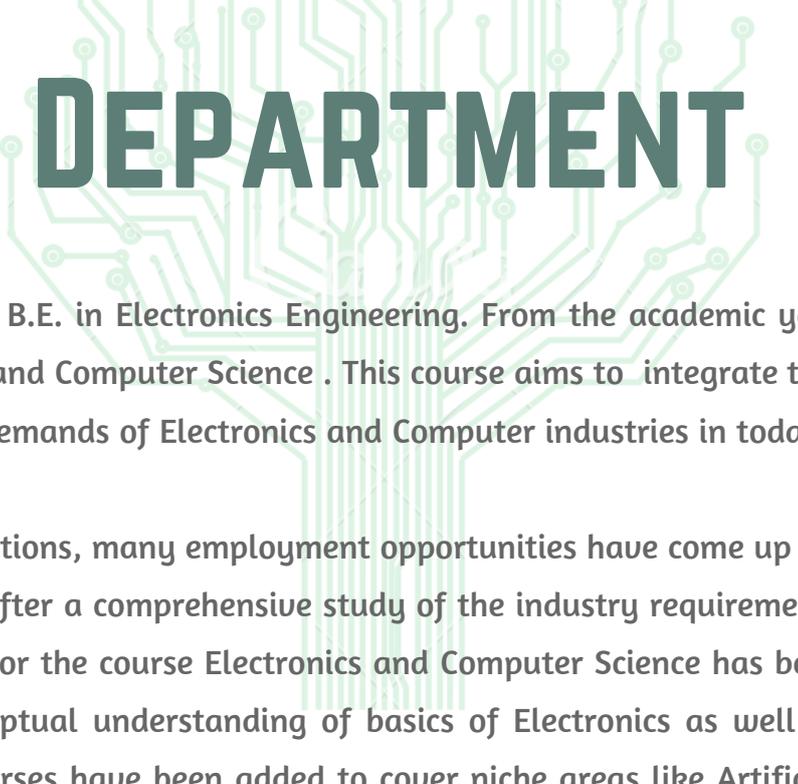
The department was established in 1987 with B.E. in Electronics Engineering. From the academic year 2019-20, the course is renamed as Electronics and Computer Science . This course aims to integrate two separate engineering fields to meet the joint demands of Electronics and Computer industries in today's world.

With the advent of latest technological innovations, many employment opportunities have come up for Electronics and Computer Science Engineers. After a comprehensive study of the industry requirements as well as technological trends, the syllabus for the course Electronics and Computer Science has been framed to include courses that build a conceptual understanding of basics of Electronics as well as Computer Science. Additionally, advanced courses have been added to cover niche areas like Artificial intelligence and Machine Learning, Data Sciences, Mobile communication, VLSI, IoT, etc. A practical-oriented approach is being followed to make students proficient in the competitive industry environment as well as prepare them for higher education.

TECHNOEDGE

Department of Electronics and Computer Science

Issue 3

"The secret of change is to focus all your energy, not fighting the old, but on building the new."

- Socrates
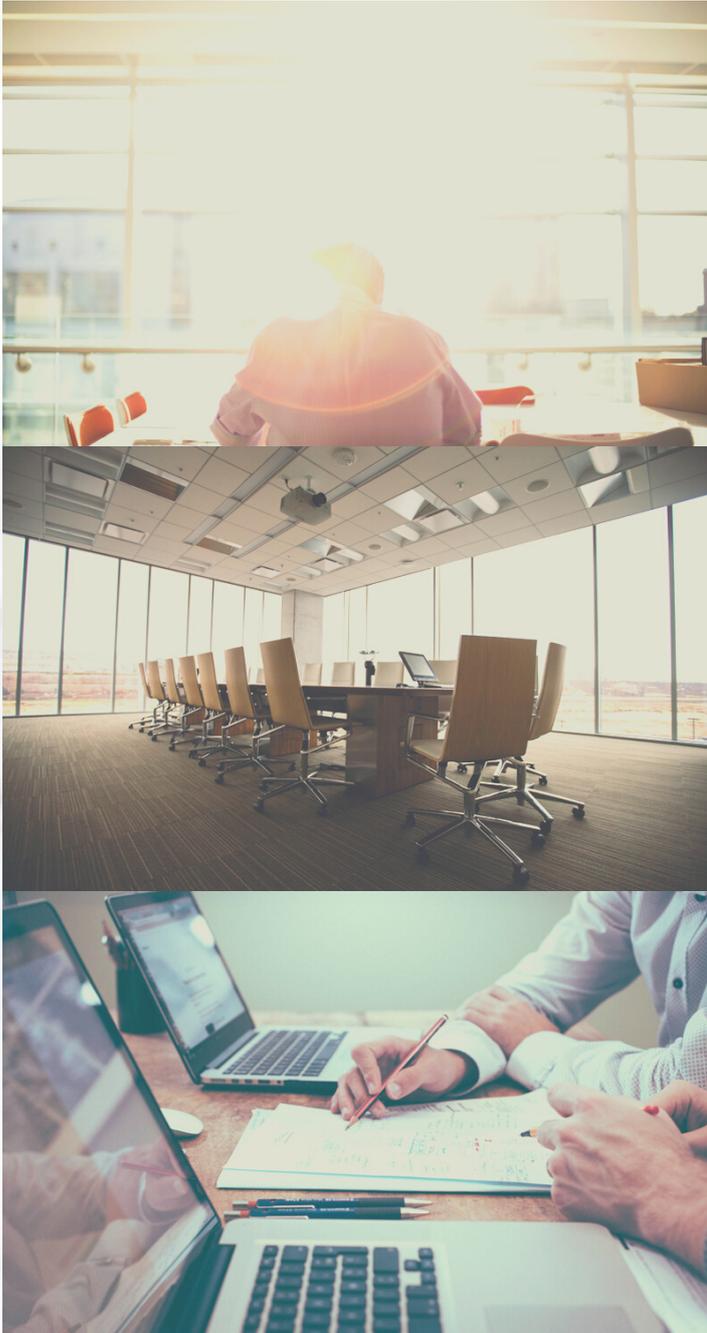
A Word From Head of Department

The Department of Electronics and Computer Science proudly presents the third issue of its Annual Newsletter TECHNOEDGE.

What a chaotic year this has been!! With a never before seen pandemic extending its time within mankind, this year has taught everyone to look at the broader picture called LIFE and deal with every issue, be it personal, professional, health or any other, head-on and find ways to triumph. Many of our close ones, family, peers and friends have witnessed life-changing incidents. This situation demands humaneness and empathy from each one of us. If we can make a difference to even one person it will go a long way.

Let us be optimistic and do our jobs well and not succumb to the temptation of taking shortcuts because

"You're braver than you believe, and stronger than you seem, and smarter than you think."

Happy Reading!!

-Dr. Sapna Prabhu
Professor and Head
Department of Electronics and Computer Science

Editor's Note

Technology is not only about engineering or being digital. This is a common misconception that it is all about the technology. It is more about the talent and people and how you impact lives of other is a positive way. Before investing in technology, invest in people who can understand it.

Our final years students understood the challenges the current COVID 19 pandemic has posed against us and have come with an innovative idea of 'Low Cost & Portable' Ventilators. Now that is called investing in people and impacting lives of people, technology and engineering is just the means.

This newsletter introduces you to our engineering students from various walk of life and who have shown interest in Sports and Drama and also dedicated their lives to Indian Army and Astrophysics,. It just emphasizes while we graduate best in class engineers, but above that we train our students to have best in class minds which helps them succeed in any career path that they choose.

While the pandemic was and is a huge challenge it made us go in online format of teaching. But we continued to support our students uninterruptedly. While we continue to face the challenge of current we are marching ahead with confidence . I would conclude by quoting Kiran Mazumdar -Shaw -

" I believe in never giving up , no matter what the odds. My mantra is ' Failure is temporary. Giving up is permanent' "

- Archana Lopes
Assistant Professor
Department of Electronics and Computer Science

ARTICLES BY ALUMNI

Your Alma Mater is like a mother, patiently accepts all your hoots but proudly boasts your achievements to the world.... No wonder why our Alma Mater is called our second home!!

We are proud of you..
Capt. Pritish Hajarnis (Indian Army)
Electronics Batch-2016

How you got inspired to join the Indian army?

-Being a sportsperson and having played football at international level , representing the country was an amazing experience. I have always dreamt of a job where physical fitness and sports are as important as the technical work. No better place than the Indian Army !

How have you groomed yourself to ensure career in the army ?

-I started with finding out what was required to be done to get into the Indian Army. Information from net was not enough - I met present and Retired Army Officers through friends and relatives which was very beneficial. Being a sportsman, fitness was in my routine.

I increased my stamina, practised theory questions from past, attended mock tests, interviews and Group discussions … all with full dedication, hard work and passion with full support from parents.

What do you love about being in the army?

-There are quite a few things that I love being in the Army. First and foremost the Uniform I wear gives me a sense of immense pride. There is no discrimination on the basis of Caste, Creed and Religion and we enjoy a great Camaraderie among us.

I love the discipline, timeliness and stress on physical fitness. The unique opportunity to visit every nook and corner of my country which is magnificent and beautiful. The Love, Respect and Admiration from the society is beyond words. In fact I love everything about being in the Army …

What is your advice to students dreaming of making career in the army? Which exams they can give? How they can prepare themselves?

-Fundamentally, they should ask themselves whether they are prepared to put in 100% efforts to take up this career. Even an iota of doubt - and they should forget this as a passing dream. Those who yearn for making Army as their career, should focus themselves fully and wholeheartedly towards the selection process - don't spare yourself - you will be entering into World's Best Profession and it isn't a cakewalk ! It's not just a profession, but a Way of Life .There are various options for students very clearly indicated in the government website (join Indian army) I cleared my SSB through SSC Technical entry which is conducted twice a year.

What are the different career options for a engineering student in the army?

-After training, the Engineers generally opt for Technical Arms like EME, SIGNALS and ENGINEERS but they can also opt for Combat Arms such as Infantry, Artillery or Armoured!

How do you organise your time?

-Depending on the place where we are posted, either at an isolated post or at a peace location, we generally start our day with Physical Fitness Training, exercises and drill followed by the official work. In the evening we indulge in some sports game which is mandatory. Before retiring to bed, I either indulge in connecting with my family & friends, Reading or watching TV.

What do you think are the secretes behind getting to where you have to go?

There are no secrets here It is simple - Passion and determination are the topmost priorities- hard work , discipline and confidence follows. I feel believing in your abilities , understanding your capabilities as well as limitations truthfully will never fail you. As they say, there is really no substitute for hard work.

Finally, I'll conclude by quoting one of my favourite army taglines -

We Live By Chance

Love By Choice

Kill By Profession

This is what Soldier's Life is all about, Glorious isn't it ?

Jai Hind

Career pathways in Astrophysics
Ms. Kiran Mankame
Electronics Batch-2015

For centuries great minds have been fascinated by the starry night sky while trying to unlock the secrets of the enigmatic universe. Many get intimidated by complicated equations in astrophysics, causing them to hesitate and reconsider this field of study. Various disciplines study space sciences, and Astrophysics is one of them. Remarkable discoveries in astrophysics have provided the answers to many fundamental questions, and the new ones like the discovery of the black hole and gravity waves are spurring questions regarding the nature of Dark Matter, Dark Energy, supermassive Black Holes, and the formation of planets near stars.

It's very important to know how one can get involved in the field of Space Sciences. Some space enthusiasts are satisfied to work at an amateur level, while others pursue to be professionals. Several opportunities are available for both and many in between. Joining at least one of the astronomical societies will help students in interdisciplinary networking, and it can lead them to assume a research assistantship. In India, we have the Astronomical Society of India, and at a global level, we have IAU, AAS, RAS, FAS, ASP, BAA, EAS, and RASC1. A good thing about these communities is that a member doesn't have to be a citizen of their country to join.

Institutes like TIFR, NCRA, and IUCAA2 offer summer internship programs to full-time students. Due to the COVID-19 situation, TIFR, Mumbai has cancelled the VSRP3 program for this year, but keeping your eyes open for future research assignments is advisable. This pandemic has drastically affected many onsite roles, but in turn, has raised numerous remote opportunities. Space Generation Advisory Council hosts various projects on a global platform, and it's a nice opportunity to be a part of more diverse teams and explore different work cultures.

NASA ISAC (International Space Apps Challenges) has multiple chapters all over the world. Since 2012, ISAC chapters have been organizing local hackathons in certain categories, as the winning team of a local event reserves its spot at the global challenge. These events challenge the creative and innovative mind to think out of the box.

In India, apart from IITs and IISc, IIA, IUCAA, and RRI4 provide masters and doctoral programs in Astrophysics. It is necessary to get familiar with sub-divisions of Astrophysics and Astronomy before enrolling in higher studies, especially when

To pursue a career in astrophysics; the fundamentals of dynamics, particle physics, general relativity, and astronomy have to be clear. The University of Mumbai generally conducts a certified course in Astronomy and Astrophysics.

I had enrolled in this course, and got a chance to meet many great personalities. By looking at the current situation in Mumbai, it looks like students will miss such onsite courses, however they can access many more e-learning opportunities. Many online course provider companies offer courses in astrophysics and astronomy from top universities in the world. Due to the COVID-19, some are now offering a few courses for zero charge.

During the preparation of higher studies, I would suggest writing to the admission office of colleges/universities, desired departments, professors and current students. This will assist the applicant to understand the structure of postgraduate/graduate programs, courses, current research and departmental opportunities such as Teaching Assistant and Research Assistant. I am looking forward to pursuing a doctoral program in Electrical & Electronics Engineering and Earth & Space Sciences. This procedure has clarified my doubts and has helped me to make my decisions. I hope this information will be helpful to the readers as well.

Ms. Kiran Mankame
Designation: Research Volunteer at SGAC
(Space Generation Advisory Council)
MS in Electrical and Electronics Engineering

IAU: International Astronomical Union, AAS: American Astronomical Society, RAS: Royal Astronomical Society, FAS: Federation of Astronomical Societies, ASP: Astronomical Society of the Pacific, BAA: British Astronomical society, EAS: European Astronomical Society, RASC: Royal Astronomical Society of Canada
2. TIFR: Tata Institute of Fundamental Research, NCRA: National Center of Radio Astronomy, IUCAA: Inter-University Center of Astronomy and Astrophysics
3. VSRP: Visiting Student Research Program

Choosing the right AWS certification

Ms. Swapnaja Limkar
Electronics - Batch 2019

AWS currently offers twelve certifications: a foundational certification, three associate-level certifications, two professional-level certifications, and six specialty certifications.

·AWS Certified Cloud Practitioner
·AWS Certified Developer – Associate
·AWS Certified SysOps Administrator – Associate
·AWS Certified Solutions Architect – Associate (SAA-C02)
·AWS Certified DevOps Engineer – Professional
·AWS Certified Solutions Architect – Professional
·AWS Certified Advanced Networking – Specialty
·AWS Certified Security – Specialty
·AWS Certified Machine Learning – Specialty
·AWS Certified Database – Specialty (DBS-C01)
·AWS Certified Data Analytics – Specialty (DAS-C01)
·AWS Certified Alexa Skill Builder – Specialty

How do I become AWS certified?
-While there are not set-in-stone steps to studying for the AWS certification, these steps are the most straight-forward.
1. Enroll in an AWS Certified Course.
   There are plenty good ones available on Udemy/Coursera/LinkedIn. I followed Stephane Maarek's course for AWS Certified Developer Associate on Udemy. This will certainly increase your knowledge of cloud computing and AWS.

2. I did solve practise papers by Stephane Maarek on Udemy. These papers might give you a great insight of what might actually appear in the exam. I'd recommend this to everyone taking the exam. Don't worry if you score less initially, these practise papers are tougher than actual exams.

3.Read multiple AWS whitepapers. These hold some invaluable information, which may answer many of your questions.

4. Practice, practice, practice. Practice exams will help ease any worries or stress you may be having about the certification exam.

5. Schedule the exam once you are ready. It typically takes anywhere from 80-120 hours of practice/studying to be prepared for the exam based on experience and the certification you are pursuing.

AWS Certified Developer – Associate
If you are just getting started with Cloud/AWS it's better to take Practitioner: This is considered the foundation level when starting your certification journey with AWS and is a recommended and optional step before taking the Associate level certifications.

The AWS Certified Developer – the Associate exam is all about developing and maintaining AWS-based applications.

·Format: Multiple-choice, multiple-answer
·Time: 80 minutes
·Cost: 150 USD

Areas Covered:

· Understanding the basic AWS architecture and the core AWS services

· Hands-on experience designing, developing, deploying, and maintaining applications

· Working knowledge of applications that utilize key AWS services such as AWS databases, notifications, workflow services, and services for storage and change management service.

The Udemy Course that I followed :https://www.udemy.com/course/aws-certified-developer-associate-dva-c01/
The Practise Papers that I solved : https://www.udemy.com/course/aws-certified-developer-associate-practice-tests-dva-c01/

Ms. Swapnaja Limkar
Designation: Associate Software Engineer | AWS Certified Developer | Photographer

DEPARTMENT ACTIVITIES

- Short Term Training Programs Organised by the Department

- Guest Lectures

- Convocation Function Batch -2020

- Student Placement Data

- Student Internship

- Courses Completed By Students

- Research Paper Publications of the Department

- Courses done by Faculty

- Faculty as Resource Person

Short Term Training / Faculty Development Programs Organised by Department
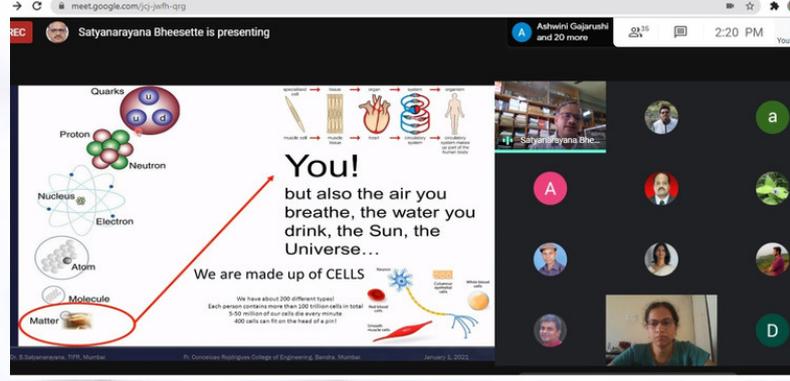
AICTE Sponsored Two Week Short Term Training Program on "Research Areas in Technologies for Societal and Rural Development ", December 21, 2020 - January 01, 2021
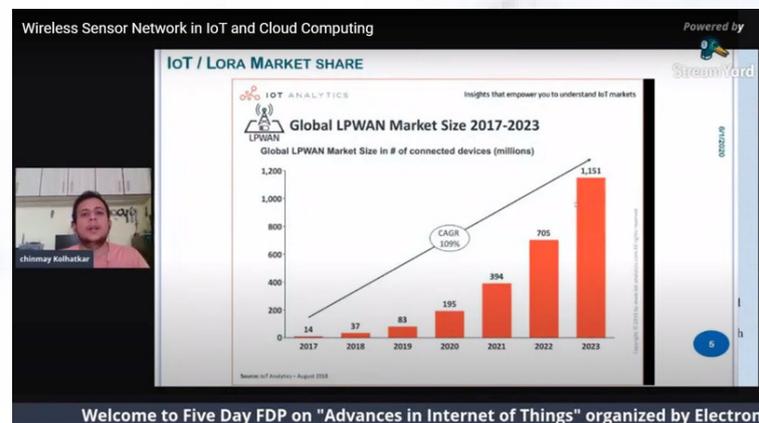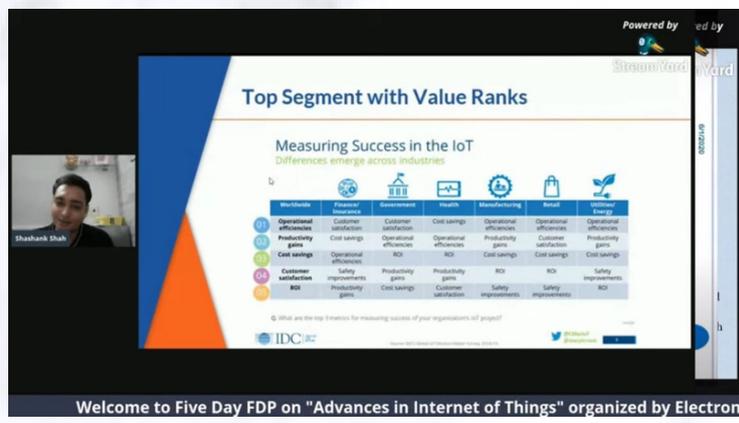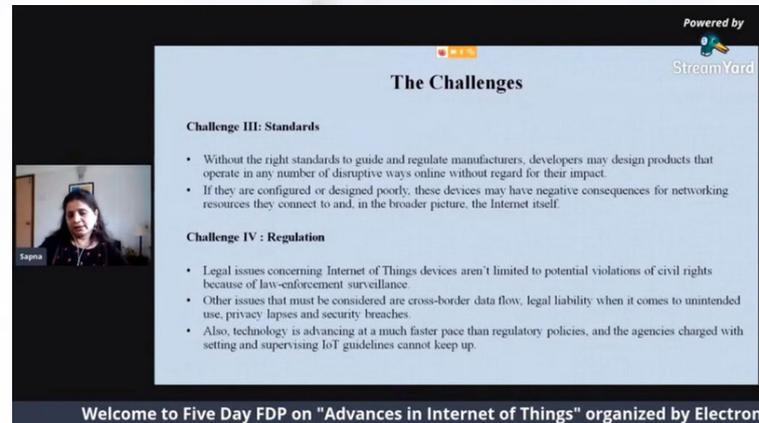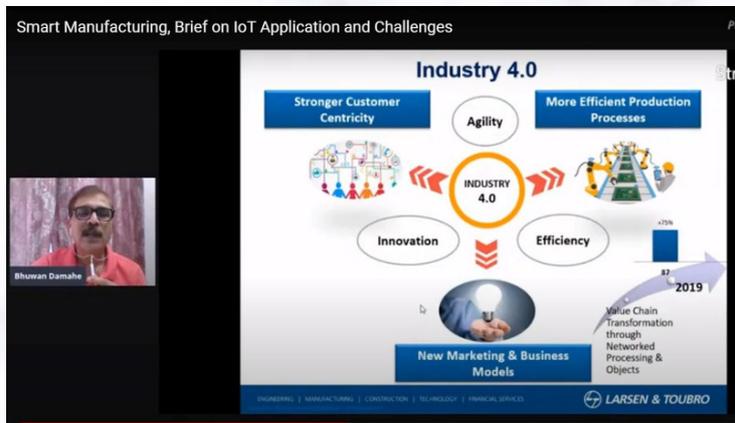
One Week Short Term Training Program on " Advances in IoT " , May 29, 2020 - June 3 , 2020

Two Days Faculty Development Program on " Essentials of Linux System Administration" April 16, 2021 - April 17, 2021

Guest Lectures

- Lecture for S.E. E.C.S. on "UML Diagrams: How to Create Use Case and Class Diagram "
  by Prof. Saurabh Kulkarni, Fr.C.R.C.E. on 4th October 2020

- Lecture for T.E.Electronics on "Scope & Opportunities in ASIC verification"
  by Ms. Shubhangi Matey, ASIC PHY Design Verification Engineer, Qualcomm Technologies, San Diego

- Lecture by for S.E. ECS on " Development of Python Project " Mr. Aman Shaikh and Mr. Edison, Batch 2019

- Lecture for S.E. and T.E. Electronics on "Modern Specializations for the Electronics Undergrads - My Experiences in Germany"   by Mr. Shashwat Sanghavi, Engineer, Research & Development @ IBEO Automotive Systems, Hamburg (Germany) on 6th November 2020

- Lecture for T.E.Electronics on "Leapfrog from Engineer to Innovator"   by Prof. Amit Kudal, Assistant Professor, Faculty of Design @ Indian School of Design & Innovation (ISDI) on 11th March 2020

Convocation Function- Electronics Batch 2020

Student Placement

Internships

CERTIFICATE OF INTERNSHIP

IS35B004

EdGate UNIVERSITY PROGRAM — **TEXAS INSTRUMENTS**

This is to certify that *Rathod Sandeep Ravsaheb* of *Fr. Conceicao Rodrigues College of Engineering* has successfully undergone two weeks Internship starting from *19th February 2021* on *Embedded System & Graphical User Interface* organized by *EdGate Technologies Pvt Ltd Bangalore* under *Texas Instruments India University Program.*

EdGate Technologies Pvt Ltd

EDGATE PARTNERS

CERTIFICATE OF COMPLETION
of
INTERNSHIP

V Solutions

We present this certificate to

GAUTAMI RAJESH THAKUR

In appreciation for your successful work as intern at VI Solutions, Bangalore, From 07-September-2020 to 09-October-2020

Mr. Sunil Kumar V
Managing Director
VI Solutions, Bangalore

CERTIFICATE OF INTERNSHIP

MYCAPTAIN — YOUTH REP

Palak Joseph was an intern with MyCaptain as YouthRep from 15th July 2020 to 15th August 2020.

During the internship, she has gained experience in Business Development, Marketing and Sales along with a focus on Community building for creating an impact.

We wish her all the very best for her future endeavors and thank her for all her contributions.

Anush Ramachandran
(Operations and HR Manager)

An NSR CEL Incubated company · MyCaptain was awarded by the SDSN as one of the top 50 youth led solutions in the world.

JPMorgan Chase & Co. — InsideSherpa

Inspiring and empowering future professionals

Palak Joseph
Software Engineering Virtual Experience

Certificate of Completion
July 16th, 2020

Over the period of July 2020, Palak Joseph has completed practical task modules in:
Establishing Financial Data Feeds
Frontend Web Development
Data Visualization with Perspective

Enrolment Verification Code JyMxGnc9cbgf0W5fkWy | User Verification Code CuMKnCnznCeLeuFdh | Issued by InsideSherpa

JPMorgan Chase & Co. — InsideSherpa

Inspiring and empowering future professionals

Affan Khan
Software Engineering Virtual Experience

Certificate of Completion
May 17th, 2020

Over the period of May 2020, Affan Khan has completed practical task modules in:
Establishing Financial Data Feeds
Frontend Web Development
Data Visualization with Perspective

Enrolment Verification Code Q4fpvSAkaWTPNG7X | User Verification Code G2Wzthg3JWTR9RHi9 | Issued by InsideSherpa

CERTIFICATE OF INTERNSHIP

MYCAPTAIN — YOUTH REP

Emmanuel Pinto was an intern with MyCaptain as YouthRep from 15th July 2020 to 15th August 2020.

During the internship, he has gained experience in Business Development, Marketing and Sales along with a focus on Community building for creating an impact.

We wish him all the very best for his future endeavors and thank him for all his contributions.

Anush Ramachandran
(Operations and HR Manager)

An NSR CEL Incubated company · MyCaptain was awarded by the SDSN as one of the top 50 youth led solutions in the world.

We are glad to inform you that Yadnesh Dhanwade from Fr. Conceicao Rodrigues College of Engineering, Bandra, Mumbai has successfully completed his internship at veshbusha from 30 May, 2020 to 20 July, 2020.

During his internship, He has done various development job regarding 3d human model building.
We found him extremely hardworking for work. He was very much devoted for product completion and has done a major role in product completion.

He associates with us very fruitful and we wish him all the best in his future endeavours.

Office of the Divisional Engineer,
Satellite Earth Station, Yeur
Western Telecom Region,
J.K.Gram, Yeur,Thane-400 606,
☎ : 8275906548, फैक्स :022-25888091.

भारत संचार निगम लिमिटेड
BHARAT SANCHAR NIGAM LIMITED
(A Govt. of India Enterprise)

Certificate
for Advance Level Vocational /Industrial Training with Specialization in Telecom Transmission Technologies- Satellite Communications and OFC.

This is to certify that Mr. Sumanto Kar student of Fr. Conceicao Rodrigues College of Engineering, Mumbai pursuing Bachelor of Engineering has successfully completed Industrial/ Vocational Training for two weeks in advanced telecom with Specialization in Telecom Transmission Technologies – Satellite Communication and OFC with effect from 16/12/2019 at Satellite Earth Station, Yeur, Thane.

His performance during this training was Excellent.

BSNL wishes him all the best for a bright future.

Place : Yeur, Thane
Date : 28-12-2019

(S. GANESH)
Divisional Engineer (Satellite Mtce.)
Satellite Earth Station,
Yeur, Thane.

BSNL VSAT

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veshBusha
Get Your Own Style

Sakshi Chhapolia
Founder

To whom so ever may concern

We are glad to inform you that Yadnesh Dhanwade from Fr. Conceicao Rodrigues College of Engineering, Bandra, Mumbai has successfully completed his internship at veshbusha from 30 May, 2020 to 20 July, 2020.

During his internship, He has done various development job regarding 3d human model building.
We found him extremely hardworking for work. He was very much devoted for product completion and has done a major role in product completion.

He associates with us very fruitful and we wish him all the best in his future endeavours.

Thanks and Regards
Sakshi chhapolia
Founder

For SAWSHT PVT LTD
Authorised signatory

C-17 office no 10 , sector -3 , Noida

QUICK METRIX

Date: 20-July-2020

To Whom It May Concern

This is to certify that Mr Yadnesh Dhanawade has completed his internship with us at QuickMetrix, WeWork Office, Vikhroli, Mumbai - 400079

During his internship period from 6 ᵗʰJanuary 2020 to 18 ᵗʰMay 2020, he has worked with ORM (Online Reputation Management) team at QuickMetrix. He was punctual and responsive throughout the internship.

This letter is being issued without any liability on the company or the undersigned.

For Lighthouse Technologies Private Limited

Surendra Baliga
Co-founder and Director

DEVOMARK

DATE: 07/07/2020

NAME: Rehan Mohd Salim Pathan

Contact No: 89767 67039

OFFER FOR INTERNSHIP

Following your application and subsequent interview, we are pleased to inform you that you have been considered for internship in this company. You will be stationed at our Andheri branch located at TRADE Avenue, 201, Suren Rd, Chakala, Andheri East with effect from 07/07/2020. You are required to report to the person in charge, Mohammed Udaipurwala for orientation and subsequent placement on this day.

The terms of engagement are as follows:

1. Reporting Time: 10:00 AM daily
2. Internship Allowance: 5000 per month
3. Every month a holdback amount of rs.1000 will be deducted from your internship allowance, which shall be reimbursed at once only after completing a tenure of 6 months.
4. Chain of Command: Beside the supervisor, you will be directly reporting to the project manager Fahad Khan.
5. Leaves – Every Sunday
6. During your tenure you may be expected to work from the client's side.

You will be working as a Back-end Developer.

It is my hope and prayer that you will work to your level best to improve the efficiency and performance of this company. Congratulations and best wishes.

Yours faithfully,

Imaad Damudi

DIRECTOR

Devomark Enterprises Pvt Ltd

JPMORGAN CHASE & CO.

InsideSherpa
Inspiring and empowering future professionals

Suneet Salian
Software Engineering Virtual Experience

Certificate of Completion
May 18th, 2020

Over the period of May 2020, Suneet Salian has completed practical task modules in:
Establishing Financial Data Feeds
Frontend Web Development
Data Visualization with Perspective

Enrolment Verification Code L3LZ4WnLhfureR6Cm |

JPMORGAN CHASE & CO.

InsideSherpa
Inspiring and empowering future professionals

Dhrumil Darji
Software Engineering Virtual Experience

Certificate of Completion
June 12th, 2020

Over the period of May 2020 to June 2020, Dhrumil Darji has completed practical task modules in:
Establishing Financial Data Feeds
Frontend Web Development
Data Visualization with Perspective

Enrolment Verification Code PgyWqt99GhFZZnBh | User Verification Code w6WSJ2ghKSs9B5NS | Issued by InsideSherpa

Utkarshini Edutech

CERTIFICATE OF ACHIEVEMENT

This Certificate is Awarded to

ASIAYAL RODRIGUES

in appreciation of your successful completion
of the work for the position of **Python Programming Intern** at Utkarshini Edutech.
During the Internship, one has completed three major projects in python.

This work declared was conducted for between
18th May 2020 to 30th July 2020

ANUBHAV ANAND
Corporate Relation Head

ABHISHEK KUMAR JHA
Founder
(Head of Operations)

Verification ID - **1020INTTAS1348**
To verify the certificate write to us at info@utkarshini.in

JPMORGAN CHASE & CO.

Inspiring and empowering
future professionals

Asiayal Rodrigues
Software Engineering Virtual Experience

Certificate of Completion
June 1st, 2020

Over the period of May 2020 to June 2020, Asiayal Rodrigues has completed practical task modules in:

Establishing Financial Data Feeds
Frontend Web Development
Data Visualization with Perspective

Enrolment Verification Code 6gTz9fnjBIQ5uQvms | User Verification Code sLZZvAjizSLgyX9fly | Issued by InsideSherpa

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JPMORGAN CHASE & CO.

Inspiring and empowering
future professionals

Vrajesh Kutty
Software Engineering Virtual Experience

Certificate of Completion
May 17th, 2020

Over the period of May 2020, Vrajesh Kutty has completed practical task modules in:

Establishing Financial Data Feeds
Frontend Web Development
Data Visualization with Perspective

Enrolment Verification Code 8QkgiByXRoYsxxWDS. | User Verification Code 8A9NzozwThBBZrNj | Issued by InsideSherpa

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Ocean Energy

Email: neeraj@oenergy.in   www.oenergy.in
Phone: +91 97664 20496   GST: 27BDSPA3963Q1ZN

Date: 21st May 2021

TO WHOMSOEVER IT MAY CONCERN

This is to certify that Mr. Aditya Shashi Pandey, a student of Fr. Conceicao Rodrigues College of Engineering, Bandra(W), has completed his internship in AI/Embedded Systems at Ocean Energy, Taloja, from 5th March 2021 to 5th May 2021.

He has worked on projects titled "R2D2" and "Angaad". As part of the project, He has developed machine vision code and trained objects using a deep neural network to make the robot detect, pick and place the object using a robotic arm. He has also helped the team with circuit design and testing.

During his internship, he has demonstrated his skills with self-motivation to learn new skills. His performance exceeded our expectations and he was able to complete the project on time.

We wish him all the best for his upcoming career.

Warm Regards,

Head,
Neeraj Abhang

TRIDENT
Nariman Point, Mumbai

Date: 12th June, 2020

To whomsoever it may concern

This letter is to certify that **Mr. Lochan Chitnis**, student of **Fr. Conceicao Rodrigues College of Engineering, Bandra West, Mumbai** has completed his Internship at Trident Nariman Point from 11th May, 2020 to 12th June, 2020.

During his training period, Lochan has observed and experienced the daily responsibilities of running the Engineering Department. He was well groomed, poised and extremely courteous in his interactions with peers. Lochan displayed confidence and eagerness to learn throughout his training. He was an excellent team player and exhibited core values such as discipline, respectful nature, attention to detail and an amiable attitude.

We wish him the very best for his future endeavors.

Thank you,

Regards,

Aparajeeta Kshatriya
Deputy Manager - Training

Trident Nariman Point and The Oberoi, Mumbai

Nariman Point, Mumbai 400 021, India T +91 22 6632 4343 F +91 22 6632 5000 www.tridenthotels.com
Registered Office: EIH LIMITED 4, Mangoe Lane, Kolkata 700 001 Website: www.eihltd.com
CIN: L55101WB1949PLC017981

Printed on recycled paper

VI SOLUTIONS

CERTIFICATE OF COMPLETION
of
INTERNSHIP

We present this certificate to

JOY PILLAI

In appreciation for your successful work as intern at VI Solutions, Bangalore,
From 07-September-2020 to 09-October-2020

Mr. Sunil Kumar V
Managing Director
VI Solutions, Bangalore

Courses Attended

Research Paper Publications

Paper Title: Improving the performance in Sentiment Analysis
Authors: Sumanto Kar, J. Scriptu Rajan, Sebastian D'mello, Dr. Sapna Prabhu
Journal/Conference: International Journal of Computer Applications, Volume No: 174
Month & Year: June 2021

Paper Title: Skin Cancer Detection and Severity Prediction Using Computer Vision and Deep Learning
Authors: Aman Shaikh, Renjit Koshi, Gauravi Phansalkar, Sangeeta Parshionikar
Journal/Conference: 2nd International Conference on Sustainable Technologies for Computational Intelligence
Month & Year: May 2021

Paper Title: Verification of 32 bit Memory Using Layered Testbench with Optimum Functional Coverage and Constrained Randomization
Authors: Yash Kumar, Sheryl Serrao, Sangeeta Parshionikar
Journal/Conference: Advances in Intelligent Systems and Computing, Volume 1162, Springer

Paper Title: Predicting the impact of Android Malicious Samples via Machine Learning
Authors: Yash Kane, Sakshi Dave, Archana Lopes
Journal/Conference: 2nd International Conference on Sustainable Technologies for Computational Intelligence
Month & Year: May 2021

Paper Title: Real Time Emotion Detection Using Deep Learning
Authors: Noel Jaymon, Ashish Yadav, Ryan Rodrigues, Sushma Nagdeote
Journal/Conference: International Conference on Advances in Electrical, Computing , Communication and Sustainable Technologies. pp. 1-7, doi: 10.1109/ICAECT49130.2021.9392584.

Paper Title: Pat-Doc App (Patient- Doctor Application)
Authors: Maria Anthony, Anmol Singh, Swarup Saju,Jayen Modi
Journal/Conference: First International Conference on Innovations in Science, Engineering and Technology.
Month & Year: April 2021. Volume 4, Issue 3

Paper Title: Modeling and design of Magnetic Tunneling Junction using MoS 2/graphene quantum dots/MoS 2 approach
Authors: Makdey Swapnali, Rajendra Patrikar, and Mohammad Farukh Hashmi
Journal/Conference: Journal of Nanoparticle Research 22, no. 7 (2020): 1-13.

Paper Title: Modeling and implementation of spin diode based on two dimensional materials using Monte Carlo sampling method.
Authors: Makdey Swapnali, Rajendra Patrikar, and Mohammad Farukh Hashmi
Journal/Conference: Circuit World (2020)

Courses Attended by Faculty

Name of the Faculty	STTP/FDP Attended	Place	Date
Narayanan Kallingal	Research Funding Projects and IPR	K C College of Engineering	May 7 – May 10, 2020
Narayanan Kallingal	Insights into quality research and Innovation	Vivekananda College of Engineering	May 13 – May 20, 2020
Narayanan Kallingal	Evolution from offline to online teaching	SPDC, Thane	May 30 – June 3, 2020
Narayanan Kallingal	Sensor, IoT and machine Learning	KJSCE, Vidhyavihar	June 1 – June 5, 2020
Narayanan Kallingal	Improving Teaching Learning Experiences with Best Practices	DJSCE	June 15 – June 19, 2020
Monica Khanore	Data Science	Fr.C.R.C.E., Bandra (W)	May 26 – May 30,2020
Monica Khanore	IoT & Machine Learning	K. J. Somaiya College of Engineering, Vidyavihar	June 1 – June 5, 2020
Monica Khanore	Advances in IoT	Fr.C.R.C.E., Bandra (W)	May 29 – June 5 ,2020
Shilpa Patil	Moodle Learning Management System	IIT Bombay	May 2020
Shilpa Patil	Technological Advancements in the field of Electronics and Telecommunication Engineering	VIT, Mumbai	June 21 – June 25,2021
Swapnali Makdey	online assessment Tool	ESSGEE DIGISKILLS	Sept 1-Sept 4, 2020
Swapnali Makdey	RECENT TRENDS IN VLSI DESIGN	Lakshmi Narain College of Technology & Science, Bhopal MP	June 22 – June 26,2020
Swapnali Makdey	Advanced Research Methodology	REST Society for Research International (RSRI)	May 11 – May 15 , 2020

Swapnali Makdey	LaTeX	IIT Bombay	April 27- May 2, 2020
Swapnali Makdey	Artificial Intelligence	Bennett University , Greater Noida	May 4 – May 8, 2020
Swapnali Makdey	Research, Funding Projects & IPR	K. C. College of Engineering and Management Studies and Research	May 7 - May 10, 2020.
Swapnali Makdey	Interactive E- Content Creation	Universal Teachers Academy, Puducherry	May 8 - May 12, 2020.
Swapnali Makdey	Creating Tech-savvy Teachers for future classrooms	St. Teresa Institute of education Mumbai	June 6 - June 10, 2020
Swapnali Makdey	Virtual Laboratories for Science & Engineering	TSEC	December 2 to December 4, 2020.
Swapnali Makdey	VLSI Design using Cadence Tools: Mixed Signal VLSI Design	SPIT , Mumbai	November 30 - December 5 , 2020
Swapnali Makdey	Project Based Learning Bootcamp on Algorithms & Data Structures covering basic concepts of DS and Algorithms with Project 'Snake Game with GUI	Scrollwell EduTech LLP	February 15- February 18, 2021
Swapnali Makdey	VLSI Analog IC Design Laboratory Primer	ENTUPLE Technologies	December 18,2020 - January 16, 2021
Swapnali Makdey	VLSI Digital IC Design Laboratory Primer	ENTUPLE Technologies	December 07, 2020 - January 16, 2021
Jagruti Nagaonkar	Advances in IOT	Fr.CRCE,Bandra	May 29 - June 2 ,2020
Jagruti Nagaonkar	Creating Tech-savvy Teachers for future classrooms	St. Teresa Institute of education Mumbai	June 6 - June 10, 2020
Jagruti Nagaonkar	Opportunities and challenges in Electronics and Allied Industries Post Covid 19	VESIT,Chembur	May 25 - May 30, 2020
Sushma Nagdeote	Python Basics, Machine Learning and Blockchain	K J Somaiya Institute of Engineering and Information Technology, Mumbai.	June 8- June 13, 2020
Sushma Nagdeote	Creating Tech-Savvy Teachers for Future Classrooms	St. Teresa's Institute of Education	June 6- June 10, 2020

Sushma Nagdeote	Machine Learning	Sasmira's Institute of Commerce & Science	June 6 - June 7 2020.
Sushma Nagdeote	Enhancing Research Work of Ph.D. Aspirants through Systematic Approach	Lokmanya Tilak College of Engineering	June 8 - June 10, 2020.
Sushma Nagdeote	Research Areas in Technologies for Rural and Societal Development	Fr. CRCE, Department of Electronics and Computer Science	December 21 2020 - January 1 2021
Sushma Nagdeote	Deep Learning	Revert Technology Pvt. Ltd.	February 08 - February 12 , 2021
Binsy Joseph	Data Science	Fr. C.R.C.E.	May 26 - May 30, 2020
Binsy Joseph	SCILAB	Pillai College of Engineering,Panvel	May 11 - May 15,2020
Binsy Joseph	Interactive-Impactful E-learning Techniques	K.C college of Engineering and Management Studies & Research	July 18 - July21 ,2020
Binsy Joseph	MATLAB based Teaching-Learning in Mathematics, Science & Engineering	Ramrao Adik Institute of Technology, Nerul	May 18 - May 22 2020
Binsy Joseph	Modern Educational Tools and Pedagogical Practices for Online Teaching	Vidyalankar Institute of Technology,Mumbai	June 21 - June 25 ,2020
Binsy Joseph	Latex	A. P.Shah Institute of Technology	April 27 - May 02, 2020.
Sangeeta Parshionikar	Research Funding Projects and IPR	K C College of Engineering	May 7 - May 10, 2020
Sangeeta Parshionikar	Technological Advancements in the field of Electronics and Telecommunication Engineering	Vidyavardhini's College of Engg.	May 5 - May 9 ,2020
Sangeeta Parshionikar	One week FDP on Python	Universal college of Engineering with spoken tutorial, IIT Mumbai	May 4 - May 8, 2020
Sangeeta Parshionikar	Vogue of Embedded System in association with VCET Texas instruments innovation lab	Vidyavardhini's College of Engg	May27-May 29,2020
Sangeeta Parshionikar	Data Science	Fr.C.R.C.E..	May 26 - May 30, 2020
Sangeeta Parshionikar	Artificial Intelligence	Universal college of Engineering	May 22 - May 26, 2020

Sangeeta Parshionikar	Empowering teachers for online teaching	St. Teresa's Institute of technology	May 26-May 30,2020
Archana Lopes	Technological Advancements in the field of Electronics and Telecommunication Engineering	Vidyavardhini's College of Engg.	May 5 - May 9 ,2020
Archana Lopes	One week FDP on Python in association with spoken tutorial, IIT Mumbai	Universal college of Engineering with spoken tutorial, IIT Mumbai	May 4 - May 8, 2020
Archana Lopes	Vogue of Embedded System in association with VCET Texas instruments innovation lab.	Vidyavardhini's College of Engg	May27-May 29,2020
Archana Lopes	Data Science	Fr.C.R.C.E..	May 26 - May 30, 2020
Archana Lopes	Artificial Intelligence	Universal college of Engineering, Vasai	May 22 - May 26, 2020
Archana Lopes	Empowering teachers for online teaching	St. Teresa's Institute of Education	May 26-May 30,2020
Heenakausar Pendhari	Technological Advancements in the field of Electronics and Telecommunication Engineering	Vidyavardhini's College of Engg.	May 5 - May 9, 2020
Heenakausar Pendhari	Programming for Everybody (Getting started with Python)	Coursera	April 30 - June 17, 2020
Heenakausar Pendhari	Opportunities & Challenges in Electronics & Allied Industries in India Post COVID-19	Vivekanand Education Society's Institute of Technology, Chembur	May 25 –May 30 ,2020
Heenakausar Pendhari	Advances in Internet of Things	Fr.CRCE,ECS,Bandra	May 29 - June 2, 2020
Heenakausar Pendhari	Disruptive Technology of Industry 4.0	FRCRCE, Comp.Dept, Bandra	May 30 – June 3, 2020
Heenakausar Pendhari	Creating Tech- Savvy teachers for future classroom	St. Teresa institute of Education	June 6 – June 10, 2020
Heenakausar Pendhari	Research Areas in Technologies for Rural and Societal Development	FRCRCE, Dept. ECS, ,Bandra.	December 21 2020 - January 1 2021
Jayen Modi	Advances in Internet of Things (IOT)	Fr. CRCE	May 29 - June 2, 2020
Jayen Modi	Machine Learning & Artificial Intelligence	Sardar Patel Institute of Technology (SPIT)	May 23- May 27, 2020
Jayen Modi	Artificial Intelligence	Universal College of Engineering (UCE)	May 22 - May 26, 2020

Jayen Modi	Opportunities & Challenges in Electronics & Allied Industries in India Post COVID-19	Vivekanand Education Society's Institute of Technology (VESIT)	May 25 - May 30, 2020
Jayen Modi	Data Science	Fr. CRCE	May 26 - May 30, 2020
Jayen Modi	eSim	IITB	January 2020
Jayen Modi	MATLAB Based Teaching-Learning in Mathematics, Science & Engineering	Ramrao Adik Institute of Institute of Technology (RAIT)	May 18 - May 22, 2020
Jayen Modi	Recent Trends & Applications of Machine Learning & Deep Learning in IT	Ramrao Adik Institute of Institute of Technology (RAIT)	May 25 - May 29, 2020
Jayen Modi	Research, Funding Projects & IPR	KCCEMSR	May 7 - May 10, 2020
Jayen Modi	SciLab	Pillai College of Engineering (PCE)	May 11 -May 15, 2020
Jayen Modi	Sensors, IOT & Machine Learning	K. J. Somaiya College of Engineering (KJSCE)	June 1 - June 5, 2020
Jayen Modi	Technological Advancements in the Field of Electronics & Telecommunication Engineering	Vidyavardhini's College of Engineering & Technology (VCET)	May 5 - May 9, 2020
Jayen Modi	Research & Current Trends in Mathematics	Mahatma Education Society's Pillai College of Engineering (PCE)	December 26 - December 31,2020

Faculty as Resource Person

Resource Faculty in Short Term Training Programs/Faculty Development Programs			
Name of the Faculty	**College/University**	**STTP/FDP**	**Date**
Dr. D.V.Bhoir	Sardar Patel College of Engineering	AICTE Sponsored One Week STTP on "OBE Implementation : Critical Issues and Solutions From the Perspective of an Administrative Responsibilities and Decision Making	November 30 - December 5, 2020
Dr. Sapna Prabhu	Fr.C.R.C.E.	One Week FDP on "Advances in IoT"	29th May- 2nd May 2020
Dr. Sapna Prabhu	Sardar Patel College of Engineering	AICTE Sponsored One Week STTP on "OBE Implementation : Critical Issues and Solutions From the Perspective of an Administrative Responsibilities and Decision Making	November 30 - December 5, 2020

Session chair/Reviewer in International Conference			
Name of the Faculty	**Conference**	**Role**	**Date**
Dr.D.V. Bhoir	ICNTE Conference, FRCRIT	Session Chair	January 15-16,2021
Dr. Sapna Prabhu	International Conference on Research Innovation in Science , Engineering and Technology (ICRISET-2020), T BVM Engineering College, Gujrat	Session Chair	

Role at the University Level			
Name of the Faculty	**University**	**Department**	**Role**
Dr. D.V. Bhoir	Pimpri Chinchwad College of Engineering	Department of Electronics and Tele Communication Engineering	Board of Studies Member
Dr.Sapna Prabhu	Mumbai University	Department of Electronics and Computer Science	Program Co ordinator
Monica Khanore	Mumbai University	Department of Electronics and Computer Science	Syllabus Setting
Dr. D.V. Bhoir	Mumbai University	Department of Electronics and Computer Science	Syllabus Setting
Shilpa Patil	Mumbai University	Department of Electronics	Syllabus Setting
Archana Lopes	Mumbai University	Department of Electronics	Syllabus Setting
Jayen Modi	Mumbai University	Department of Electronics and Computer Science	Syllabus Setting
Sangeeta Parshionikar	Mumbai University	Department of Electronics and Computer Science	Syllabus Setting

Student Articles

Low Cost Portable Ventilator

- Hrushikesh Kuwlekar
- Om Nerurkar
- Pranjal Mahajan
- Rishika Korade

(B.E. Electronics- Batch 2021)
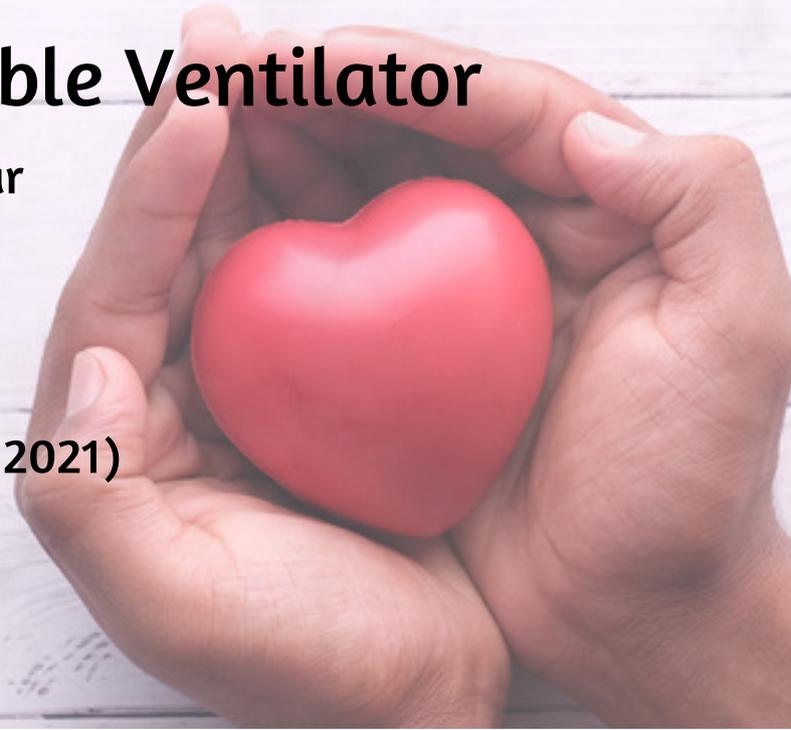
This is an article on our BE Project made by the students of BE ELECTRONICS. With the help of this article, you will get a brief idea about our project.

Introduction:

As the world braces for a growing wave of patients with Covid-19 in our hospitals and ICUs, we must ensure that we have the key equipment needed for care of patients. What better opportunity could we get to serve a social cause by making a product on similar lines which tackles with the effects caused by the virus. Patients with severe COVID-19 infection commonly develop ARDS, this is defined as:

'an acute diffuse, inflammatory lung injury, leading to increased pulmonary vascular permeability, increased lung weight, and loss of aerated lung tissue … [with] hypoxemia and bilateral radiographic opacities, associated with increased venous admixture, increased physiological dead space and decreased lung compliance.'

"In short it causes fibrosis of the lung tissues, making that portion of the lung hard as stone and inactive for the rest of the life (a long-term effect)." Thus, your lung capacity decreases permanently.

Ventilator is one such device that could help overcome the breathing problem. As the COVID-19 pandemic continues to expand, one thing has become clear: there aren't enough ventilators to go around. Ventilators are devices that precisely control the flow of air in and out of a patient's lungs, and must be monitored and adjusted by a respiratory therapist, critical care consultant, or specialized nurse to make sure that the volume and pressure settings are correct for a given individual.

How does it work?

A ventilator uses pressure to move air or a mixture of gases (like oxygen and air) into the lungs. This pressure is known as positive pressure. You usually exhale (breathe out) the air on your own, but in some situations the ventilator may have to perform this function for the person

A ventilator can be programmed to "breathe" a specific number of times over a certain time frame, usually minutes. And it can also be programmed to trigger the ventilator to force air into the lungs. But, if you fail to trigger it within a certain amount of time, the machine automatically supplies air to keep you breathing.

So, here we are Team Venti with a proposed ventilator solution –
To build a ventilator capable of monitoring vitals of a patient and provide the patient with oxygen and regulate the breath rate when they are unable to breathe on their own. Along with it should also be supported by a battery system in order to have full functioning even during short and long power cuts to provide uninterrupted patient care.

We also aim at deploying the product in ambulances or during emergency transfers to bigger medical institutions where our portability function comes into picture.

Social relevance of ventilator

Through our proposed solution we aim at developing a product that is capable of functioning in low resource areas and situations wherein there is interrupted power supply. This is a product suitable for medical clinic, and ambulatory service, or any other location. They can work in requesting conditions with basic support.

Portable factor importance

Our designed product is lightweight making it for for being a portable device. For instance, situations requiring emergency transfers to bigger medical institutions is where our portability function comes into picture as a feature or prime importance

Block Diagram of Our project:
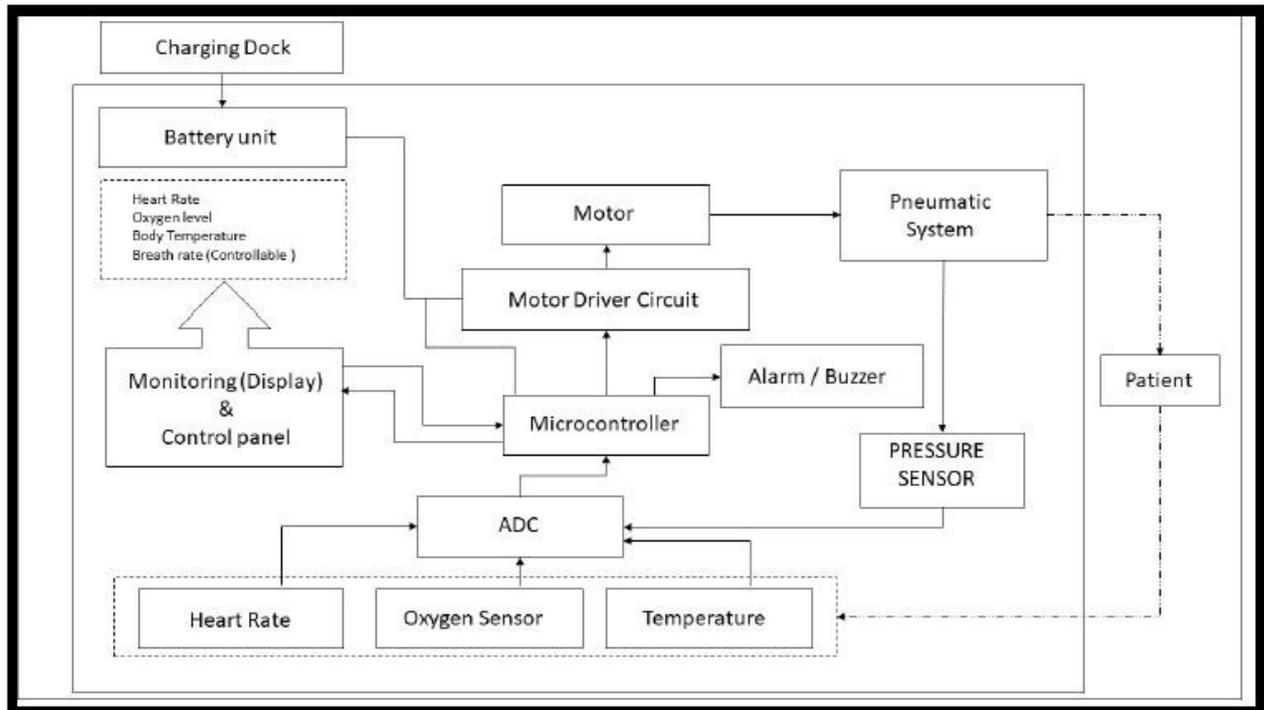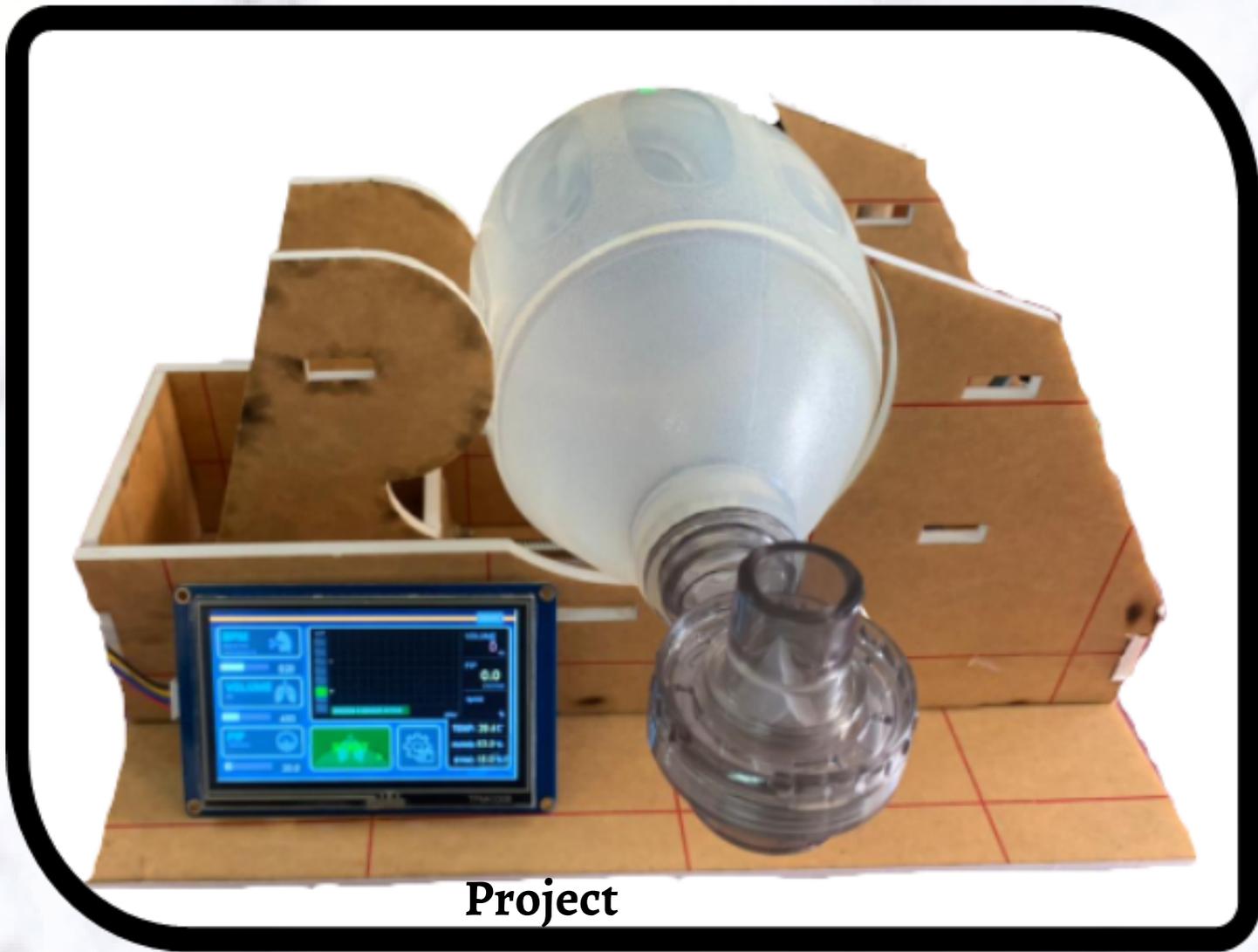
Project

Have the courage "to swim against the tide". Have the courage to be happy.

Pope Francis

Atheleta: Technology in sports
Alden Noronha
Electronics- Batch 2021

1.What do you see yourself accomplishing in 5-10 years?

I have been pursuing the field of Athletics since the past 15 years, so it has been going hand-in- hand along with my education. My parents have been very supportive in both fields and have kept me motivated to excel in both. It was my very own decision to pursue Electronics Engineering, although I was told by many that it would be difficult to handle, but it motivated more to take it up. When I started my Engineering, I was left with a question that "I am anyway pursuing Athletics as my career but how do my make my Engineering useful? Where could I apply this?" That's when I discovered the field of Sports Engineering thereby ensuring that my Sport and Education went Hand-in-Hand.

In the next 5 to 10 years, I see myself Representing The nation at International Competitions and win Medals with gradual Progression. I also would want to explore the field of Sports Engineering working towards using my knowledge to improve training performance. Socially I would like to support Athletes at the grassroot level and encourage the support for upcoming athletes

2.Which strengths do you believe you have that make you a good athlete?

The first and most important Strengths that makes me a good athlete is Discipline. Without Discipline I would not be standing at the place I am currently right now. Discipline is required in any field one is pursuing; it is not a quality that's to be simply applied if one is pursuing a field but it is a quality that is to be applied in life. Discipline has played and still plays a vital role in my life, keeping the same discipline in my training habits has led to keep myself disciplined in different aspects of life, precisely Engineering.

Another strength is be Mentally Strong, the mind can make or break your body, initially when I was into competitive events, I used to be afraid of my competitors which led to many failures. Keeping myself mentally strong was a difficult task but not impossible. Consistency and Persistency are other qualities that I have managed to deliver, keeping myself at the top of my field in Athletics(110m Hurdles). Hard work and will power. Physically a good athlete should work on various aspects such as Speed, Strength, Endurance, Power, Agility, Reaction, Stability, Mobility etc. Not to forget a good and suitable diet to follow.

3. How do you manage engineering studies along with your sports?

I would not deny that handling both is a tedious task, but I try my best to deliver the best in both sports and education. Due to a hectic schedule, I find it difficult to spare time for self- study. I solve this issue by frequently asking doubts and making sure that the concepts are fresh in my head, some times sacrificing a little sleep for studies also works. Fortunately, I am surrounded by really helpful mates, who motivate me to work and study.

4. Is there a coach or athlete that you look up as a model and why?

For me training is like my devotion to The Almighty One above, I totally believe in prayer and being spiritually strong. My hardwork at training is my Prayer to God. I am training under my coach Mr. Dayanand Shetty for the past 15 years, I don't have any particular role model as such, but I do admire my coach and my parents, the amount of hard work they have put behind me motivates me even more to strive to achieve success. Athletics may seem like an individual sport, but in reality, there are many people associated behind that one athlete. I dedicate my hardwork to all those who have tried to help and support me in this journey

5.Rank top five priorities currently in life

·To win medals at the international level and keep consistency, ultimately winning a medal at the Olympic Games.

·To excel in the field of Sports Engineering/Technology.

·Supporting Sports at the grassroot level in the nation.

·To make the nation and all its people proud.

6. Who and How and at what levels you have got grooming towards sports?

My parents have played a very pivotal role in shaping my mindset. They have kept me disciplined, their strict and disciplined attitude has kept me from diverting myself to social distractions, they have made sure I was engaged in some or the other work, as I believe that an idle mind is a devil's workshop.

My coach has also kept me disciplined, he has made sure that I took proper rest and prepared myself for every training session. He has not only boosted me physically through training but also supported. He has trained me for so long that he has known how my body functions and what all type of workout it needs.

I have been surrounded by a group of good and understanding friends, their support has motivated me to work harder. They not only supported at times of victory but also at times of failures.

Not to forget my competitors, although they were my rivals, I have made very good friends out of them. Being with them I have learnt the value of true sportsmanship

Why so much Drama??
Vivian Serrao
Electronics- Batch 2021

"Kitna drama karega? " We've all heard that line previously, right? Well, everything began for me when I got the chance to play the role of Aladdin from Disney at school. The music, the dialogues, the romance made me consider accomplishing something in dramatics. Also, isn't that what we all live for?

Instead, I took up science (gotta keep your alternatives open), however, the love for the stage won't ever leave. It kept me going and I was quickly absorbed in the junior college team and began competing. In my first competition, I won ahead of all comers. FIRST PLACE! That fervor, that delight, pushed me to improve. It went to a point wherein I was unable to control my adoration for drama. I ended up going for a competition, a day prior to my Board tests, sounds insane, isn't that so?

However, at that point, reality strikes. Acting/drama is only for rich kids who have godparents in the business. A career in acting isn't just about as reasonable as it sounds. You've heard it regularly as well.

A practical, safer profession alternative would be taking up Engineering, I guaranteed myself. The entire 8-5 corporate-life routine at college made it hard to find similar individuals and go as a group. Henceforth, I chose to go solo. Two events, two awards. I was joyous beyond words. Word went around, everybody began to talk about this. It resulted in a point where everyone wanted to see me put up an act, which helped me join the hobby-based drama club in college that used to put up a play at the intra-college cultural festival

Quick forward to the current day, Head of the hobby-based club, presently known as Dramatics Club of CRCE, with more than 100 students who have been a part of our club, won numerous awards at various institutions, made a streak of wins for three consecutive years that has not been broken at this point and defeated art college teams that have specific hours dedicated to dramatics. Recently founded the Arts Society of CRCE, a platform for all engineers to explore, enhance and exhibit their talents.

Dramatics has helped me a lot, it has assisted me to build my confidence and develop other talents. I handled various events and performed as an artist at Taj Lands End, Essel Vision (Zee TV), Edelweiss, Kanakia Group, Infinity Mall, weddings, birthday festivities, and some more. I hosted my first open mic post the lockdown and I believe that it was a tremendous achievement.

Swimming against the tide is something that I've always done. You may ponder, where do I see myself in the next 5 years? In a theatre? In a music video? In a show? I don't know either, however, all I can say is, I will do my thing and will always be cheerful.

Farewell Dear Students, Batch -2021

"Happy journey !!
You are now on a ship that sails you in a new voyage of
opportunities and career establishments. Good Luck
on your new journey . May success always be with you...

CONTACT US

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