



DIGIT 2021

"We get IT done, a virtual journey of live pictures"

INDEX

1. Editor's Note
2. From HOD's Desk
3. SWE CCEW wins Awards under the guidance of Anagha Ma'am
4. IoT Based System for Detection of Sewage Blockages
5. My Journey with Katalyst
6. Microsoft Engage Mentorship 2021 Experience
7. Learning and Guidance through Achievements
8. Importance of Networking
9. A Guide to Build a Better Resume
10. Student Publications
11. Conference Publications
12. Faculty Achievements
13. Faculty Research Contribution
14. Placement Record

Editor's Note

Welcome to DigIT - The Information Technology Department's yearly newsletter. What you will find ahead is a culmination of the department's work over the past year in Technical and non-technical arenas.

To say that we're excited to be summarizing and placing before an eventful and unprecedented year, would be an understatement. Despite having faced all the challenges, we are extremely proud of how the department has fared and how the students and professors have adapted to the circumstances and put in an earnest amount of effort in everything that they've accomplished.

Editor's Notes are often a little rigorous to write and need a lot of racking of brains, especially when the content has been collected and published within a fortnight. Because how do you summarize a year's worth of hopes, ambitions, accomplishments.

The roller coaster that we've been through? And how do you express your sincere desire to uphold the practices and nuances that make us unique? Yet here we are, trying to deliver what we genuinely believe in and will continue to believe in.

It's been a pleasure to get acquainted with how our students have gone out of their way at various steps and achieved milestones that are inspiring and heartwarming. The faculty and their never-ending pursuit of excellence is something we all look up to and will continue to do so in the future.

We thank our faculty advisor, Dipti Ma'am, who has guided us throughout the course of publishing this newsletter with her valuable suggestions. It's been a pleasure working with our peers and working towards giving an overview of the past year.

We hope you enjoy the magazine and it motivates you to harness your potential and make learning an inspiring and consistent affair.



Meet The Team



Faculty Advisor

Dr. Dipti Patil

Students

Meghana Mohanty

Vinita Chimalgi

Aishwarya Narwadkar

Isha Deshpande

Srushti Nikam

Neha Tonpe

Anjali Yadav

Abhilasha Gupta



From HOD's Desk

"We all are in the same storm but in a different boat"

All of us have different challenges, different needs and different situations to face. Someone's boat is still floating silently whereas someone's ship has been wrecked. We all will emerge from this biological storm with new learnings and experiences. We will remain undeterred and be positive!



Dr. Anagha Kulkarni

Staff and students alike have gone through very tough times. Hopefully this new academic year 2021-22 will bring a ray of hope and happiness.

It was great to see all the teachers learning new ways of teaching and getting used to online teaching. Students, as well, cooperated and overcame the barriers.

Sneha Thombre completed her PhD from IIT Guwahati. Congratulations Dr Sneha!

Dr. Dipti Patil was awarded Best Innovation Award 2021 by Savitribai Phule Pune University. Congratulations Dr Dipti!

Wishing health to all.

SWE CCEW wins Awards under the guidance of Dr. Anagha Kulkarni Ma'am

Every year Society of Women Engineers (SWE), USA confers awards in different categories to SWE affiliates during the WE Local Awards.

SWE CCEW Affiliate received two awards this year at WE Local awards 2020-21 for their outstanding contribution in STEM.



SWE CCEW Affiliate received the "Professional / Collegiate Event Award" for 2020-21. This honour is conferred on the University Affiliate for collaboration with a Professional to organize an event. Cummins College of Engineering for Women was awarded for their collaboration with Cummins India Limited for organizing INCUBE Conference in Oct 2019 and Oct 2020.

SWE CCEW Affiliate also received the “Outstanding Outreach Event Award” for 2020-21. The award was conferred for conducting STEM activities in Maher Ashram, Mahilashram School and with IDEA Kids Foundation.



IT students are groomed to become industry ready engineers. They are participating in various state level, national-level competitions and demonstrating their IT skills. Through BTech projects students are nurtured to think innovatively, apply learned IT concepts to provide IT solutions. Projects are research-based, sponsored projects by industry or projects having a societal impact.



Project Name: IoT Based System for Detection of Sewage Blockages

Group members: Shivani Mithapelli, Pratim Bhosale, Shivani Bollabattin, Rucha Patel

Project Guide: Dr. Dipti Patil

The project was related to sewage blockages detection using IoT. This project was sponsored by Fluid Robotics, Pune. The project won NES Innovation Award 2020 as the "Most commendable Project". Students of this project also grabbed the first prize in the International Project competition of PICT "Impetus and concepts" with a Cash Prize of Rs. 11000/-. The project group also received the award of "Kedar Tumne Best innovation award 2020' at the College level.

1. Received NES Innovation Award 2020 as "Most commendable Project".

NES

Special Mention – Most Commendable Project

Project Name : IoT Based System For Detection Of Sewage Blockages

MKSSSS Cummins College Of Engineering For Women, Pune

PROJECT GUIDE	INNOVATORS
Dr. Dipti Patil	<ul style="list-style-type: none"> Pratim Maloji Bhosale Shivani Prabhakar Mithapelli Shivani Suresh Bollabattin Rucha Narendra Patel

100% AUTHENTIC

Shivani Mithapelli

Sahani Vaishnav

Dr. Dipti Patil

2. First prize in PICT's Impetus and Concepts '2020, an International Project Competition and won a cash prize of Rs. 11,000.



3. Won the Kedar Tumne Best Innovation Award 2020 at the college level as the best B.Tech project.



My Journey with Katalyst

-Diksha Sharma, TY

Katalyst is an organization that empowers women for equality in opportunity and leadership, their mission being to accelerate the growth of young women in professional education.

I started my journey with Katalyst two years back in October 2019. I initially thought it would be a little tedious to spend almost 16 hours on weekends attending the training programs, as I heard of it during the orientation. But my assumption was wrong. Learning along with fun is always an amazing experience. It's been almost a year and a half, but I still remember our DRDO visit.

Experiencing adventure and fun through outbound, boosting self-confidence, creativity, and leadership qualities through tech-fests, exploring the corporate sector through industrial and field visits, developing technical and interpersonal skills through various training programs, brainstorming through several quizzes, activities, competitions, and a lot more! The one-to-one mentorship has proved to be an extremely important factor in shaping my life.



Picture of DRDO Pune visit 2020

Due to the pandemic, all the programs are being conducted virtually. I do miss the feel and offline fun, but my personal growth has never been compromised. I hope the situation gets better with time and we get a chance to experience it "offline" in our upcoming journey.

In conclusion, I would like to say that Katalyst is a catalyst to my professional, personal, and social growth and I am more than excited for the next two years' journey.

I will cherish these memories forever!



Microsoft Engage Mentorship 2021 Experience

-Shilpa Jagtap, TY

Microsoft Engage is a student engagement and mentorship program by Microsoft that offers 1 on 1 mentorship to shortlisted students while working on a project, learning sessions specially curated for Engage students and a sneak peek into Microsoft's culture and values. I was selected for the program this year and got the opportunity to be mentored by some amazing Software Engineers from Microsoft.

Selection Process :

There was a qualification test in June, based on Data Structures and Algorithms (DSA) and Git Basics. The test was 45 mins and consisted of both objective and subjective type questions. It required a strong grasp of DSA as you had to answer the questions in a very limited time.

The Challenge :

This year's challenge was to build a Microsoft Teams Clone with one mandatory functionality – a minimum of two participants should be able to connect and have a video conversation. We had to work on the project as individual contributors and every week we had a meeting with our mentors discussing the progress, new features and code quality. Getting feedback for your work from engineers working on real projects was the best part!

Below are my submission details :

Website Link - <https://microsoftteams-clone.netlify.app/>

GitHub repo Link - <https://github.com/shilpa482/microsoft-team-clone>

Powerpoint presentation link -

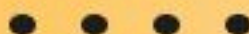
[https://drive.google.com/file/](https://drive.google.com/file/d/12oaNLFY70blgBFZvV8ON1H4gm6F23GIC/view?usp=sharing)

[d/12oaNLFY70blgBFZvV8ON1H4gm6F23GIC/view?](https://drive.google.com/file/d/12oaNLFY70blgBFZvV8ON1H4gm6F23GIC/view?usp=sharing)

[usp=sharing](https://drive.google.com/file/d/12oaNLFY70blgBFZvV8ON1H4gm6F23GIC/view?usp=sharing)

This is the demo video of my Microsoft Teams Clone project submission for the Microsoft Engage Mentorship Program 2021

Youtube Link - <https://youtu.be/2RQ2BFxLgOE>



Learning and Guidance through Achievements

Esha Chaugule is a current B. Tech IT student.

She shares some of her achievements and the experience associated with them below; the Application Process, the Deadlines, the Work behind the processes and the Takeaways. I'll elaborate on the following three of my achievements:

- 1) Global Internz winner, won a free International Internship at a Canadian company called Pareegh Inc. Canada.
- 2) National Engineering Olympiad 4.0 All India Rank 10
- 3) Copyright on a device called Fertilizerometer.

1) Global Internz winner, won a free International Internship at a Canadian company called Pareegh Inc. Canada.

Application process: I registered on this website and gave a test that was based on aptitude. There were 30 questions to be solved in 60 minutes, JEE advance level. I won the second position and got the internship. Deadlines for the events: The internship was based on Data Analytics and Visualization of the IPL Series. The assignments had deadlines within every three-four days.

they were reviewed, and a satisfactory report was given. Along with this, we had to submit two more analysis reports on two different datasets. I submitted one on Movies and another on Music Bands.

Work that goes behind the process: Data Analytics and Visualization of IPL Series. Creating PPTs and explaining our analysis on data, why certain events occur?, why certain don't?, Can a particular decision bring in a particular result? Hence, the decision on further steps is to take, to bring in the desired output.

Learning/Takeaways from the Internship: Storytelling through Data Analysis.

2) National Engineering Olympiad 4.0 - All India Rank 10

Application process: We got an email from the college informing us about the National Engineering Olympiad 4.0. I applied on the given link www.nationalolympiad.org

Deadlines for the events: Round 1 - 21st May 2021, Round 2 - 26 July 2021

Work that goes behind the process: I studied from Geeks for Geeks Aptitude section and IndiaBIX platform.

Learning/takeaways from the competition: Don't underestimate yourself.

3) Copyright on a device called Fertilizerometer.

Application process: I applied online through the copyright filing process site.

Deadlines for the events: One month to give a detailed description of your idea, after the title submission.

Work that goes behind the process: Having a unique, detailed idea of your invention is very necessary. Pick any problem that the world faces right now, and think of its solution.

Learning/takeaways from the competition: Don't be afraid to think out of the box.

-Esha Chaugule



Importance of Networking

-Yashshree Nigudkar

Hi guys, I am Yashshree, yet another person talking about the importance of networking and preparation for interviews. There are some things that we, as engineers, can never really step out of and that is networking. Whether a person is at the zenith or just a beginner like you and me, networking is always going to take people places. There are thousands of people who talk about the importance of networking, and I will reiterate their words- 'Networking is super important. Along with that, I'll touch upon the internship preparation as well.

The main point of this article would be to give a brief overview of how to prepare for internships and the importance of networking. Any time that you have in your hand is good for an internship. Our college offers a vast variety of companies and domains where one can pursue internships right from product bases and FinTech to manufacturing. So, the first and the most important point would be to choose the domain. After this, the process is similar for all domains.

Start reading up on interview experiences of those companies (Hackerrank, Leetcode etc), and probably contact (cold message) a few people on LinkedIn who were/ are working at that company. Then start preparing the most common topics, for IT and CS- it would be coding. Along with that prepare for the core subjects (OS, networks, compilers etc). Then the next step would be to participate in competitions and try to gain as much experience as you can. Then when you feel somewhat prepared (I don't think one can ever be fully prepared), apply for the companies (according to the schedule) and try to give your best.

With more aptitude tests and interviews, you will slowly but certainly master this technique, till it finally lands you your dream job!

The second point is to try to build your network, whether it is at a function in your family/society or some competition you are participating in (it's much harder online, Zoom breakout rooms help here sometimes). Start making connections on LinkedIn. I always stress the importance of LinkedIn and the long-term impact it can have on your career. Start posting relevant content, your resume, achievements etc on LinkedIn so that recruiters can reach out to you (yes, they do if you have a well-presented profile!).

Follow leaders in the industry and as always, help out fellow peers/juniors that reach out to you! With practice, everything is possible. Just try to have fun, learn from the seniors and leaders and never give up!

Do reach out to me on LinkedIn to get started with networking!

Cheers!



A Guide to Build a Better Resume

-Yashshree Nigudkar

“Hard work beats talent when talent doesn’t work hard.” is a mantra that I have believed in strongly all my life. With hard work, we can surely overcome any obstacle, the most important thing here is to never give up. In this article, I aim to help out others and give an idea regarding what you can do to graduate with flying colours, to the best of my knowledge.

My name is Yashshree Nigudkar, and I currently work with Goldman Sachs as an analyst. I graduated in 2021 from the IT department, with a CGPA of 9.23. I was second in my department. I have published 2 papers in international conferences and they have been printed in two different series in Springer. My final year project titled “Indian Sign Language Recognition using Deep Learning” was funded by IBM, with a grant of Rs. 12 L. Apart from this, I have participated in many competitions, workshop.

In this article, I aim to write more about publishing papers and how one should proceed regarding it. So, the first and foremost thing is to choose a topic. This can be your mini project topic, final year project topic, or just any topic that you have done something in (maybe a small project on your own). The most important thing here is to have curiosity about that topic, plus some background regarding it before actually writing a paper.

next thing is choosing where you will submit it. You can research good conferences online, ask your professors or mentors as well. This particularly requires a lot of time, because different conferences have different submission timeframes, thus I would suggest at least keep this window large enough to accommodate most submission dates

The next thing is to write the paper. This is a very lengthy and time-consuming process, which you have to manage along with college work/exams

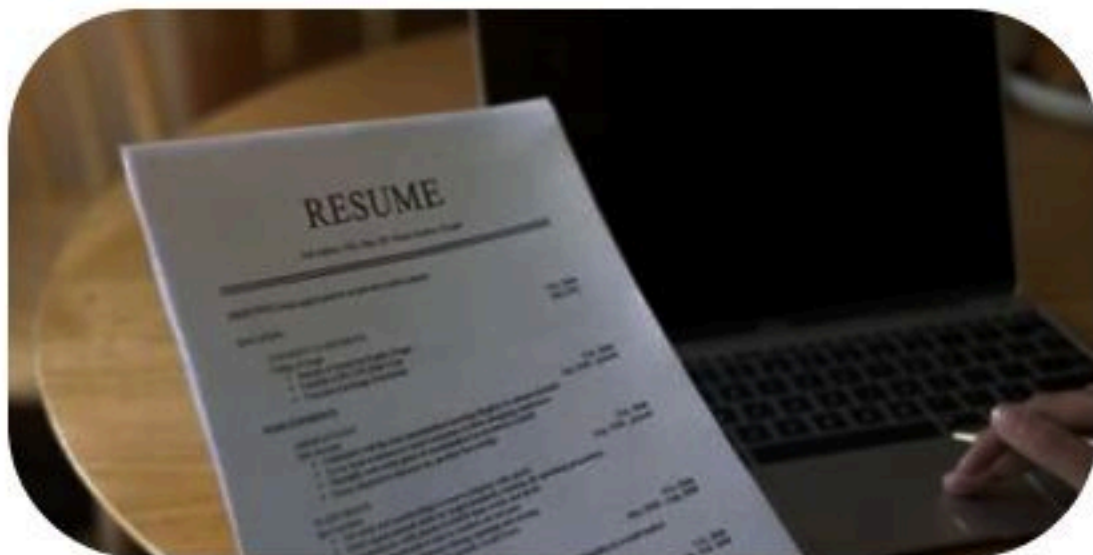
It's better to write in groups, as you can have different perspectives from different people (plus less effort too, but working in a team can be challenging at times), but you can write it individually as well. Generally, keep one professor in the loop with your topic, as professors are more connected to the academic world and can guide you better.

Finally, after weeks of writing, rewriting and editing, you can submit the paper. Usually, conferences have some registration fee that you have to split up if you work in teams (FYI our college reimburses for 50% of the cost, thus do take advantage of this scheme). The final part is acceptance, and I would suggest that our professors can guide you in this step better than anyone else. The further steps include proofreading, making changes and creating CRC (Camera Ready Copy), and these are fairly simple and the details are generally given on the conference website.

Apart from research papers, to build your resume and reach new heights, you need to maintain a decent CGPA (8.2+ for really good companies/internships).

Work hard and be consistent in this aspect. Even if you have a low CGPA, try to increase it semester by semester. Apart from that, participate in as many competitions as possible.

Apart from research papers, to build your resume and reach new heights, you need to maintain a decent CGPA (8.2+ for really good companies/internships). Work hard and be consistent in this aspect. Even if you have a low CGPA, try to increase it semester by semester.



Student Publications

1 . IRJECT - ICIT CA 2021 (International)

Title of Paper - Family of Friends - A Hostel Utility System (Vol 08, Issue 05, May 2021)

Faculty member :- Prajakta Deshpande

Students :- Mahima Badjate
Saniya Ponkshe
Toral Patel
Sneha Rohida

2 . International Journal of Future Generation Communication and Networking (AY 2020 - 21)

Title of Paper - Emergence and Convergence of AI, Blockchain and IoT (Vol 13, No. 4, (2020), pp. 4919-4926, 2020) (eSCI indexed)

Faculty member :- Dr. Dipti Patil

Students :- Rutuja Kolhe
Anuya Joshi
Deeksha Gupta
Prachi Mate

3 . International Journal of Advanced Scientific Research and Engineering Trends (AY 2020 - 21)

Title of Paper - Leaf Disease Detection System using Deep Learning: A Review (Vol 05, Issue 12, April 2021)

Faculty member :- Milind Kolambe

Students :- Dhanshri Salunke

Megha Vishwase

Pratiksha Palve

Rewati Pawar

4 . Information Technology in Industry AY 2020 - 21 (International)

Title of Paper - IoT Based System for Detection of Sewage Blockages (Vol 9, No. 1, 2021, Published Online 1-03-2021) (eSCI indexed)

Faculty member :- Dr. Dipti Patil

Students :- Pratim Bhosale

Shivani Methapalli

Shivani Bolbattin

Rucha Patel

5 .International Research Journal of Engineering and Technology (IRJET)

Title of Paper - Fake News Detection System (Vol 08, Issue: 05, May 2021)

Faculty member :- Harsha Sonune

Students :- Aditi Raut

Aleena Marium

Ruchika Navandar

Shraddha Chitte



Conference Publications:

1. Tenth World Congress on Information and Communication Technology - WICT 2020 (16-Dec-2020 to 18-Dec-2020)

Title of Paper - Literature survey: Application of Machine Learning Techniques for Static Sign Language Recognition (SCOPUS Indexed)

Faculty member :- Dr. Anagha Kulkarni

Students :- Yael Robert

Yashshree Nigudkar

Namita Mutha

Pranjali Barve

2. Fifth International Conference on Data Management, Analytics and Innovation (15-Jun-2021 to 17-Jun-2021)

Title of Paper - Application of Deep Learning Techniques on Sign Language Recognition - A Survey (SCOPUS Indexed)

Faculty member :- Dr. Anagha Kulkarni

Students :- Yael Robert

Yashshree Nigudkar

Namita Mutha

Pranjali Barve

3. Fifth International Conference on Data Management, Analytics and Innovation (15-Jun-2021 to 17-Jun-2021)

Title of Paper - Literature Survey: Sign Language Recognition using Gesture Recognition and Natural Language Processing (SCOPUS Indexed)

Faculty member :- Dr. Anagha Kulkarni

Students :- Aditi Patil

Harshada Yesane

Minal Sadani

Prajakta Satav

4. IEEE fifth International Conference on Trends in Electronics and Informatics (3-Jun-2021 to 5-Jun-2021)

Title of Paper - A Pedagogical Adoption of Game Theory to Finance Technology (SCOPUS Indexed)

Faculty member :- Dr. Dipti Patil

Students :- Rutuja Kolhe

Anuya Joshi

Deeksha Gupta

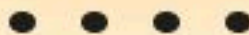
Prachi Mate

5 . Fifth International Conference for ICT for Sustainable Development (23-Jul-2020 to 24-Jul-2020)

Title of Paper - Blockchain-based e-Voting Protocol (SCOPUS Indexed)

Faculty member :- Harsha Sonune

Students :- Shreya Chafe
 Divya Bangad

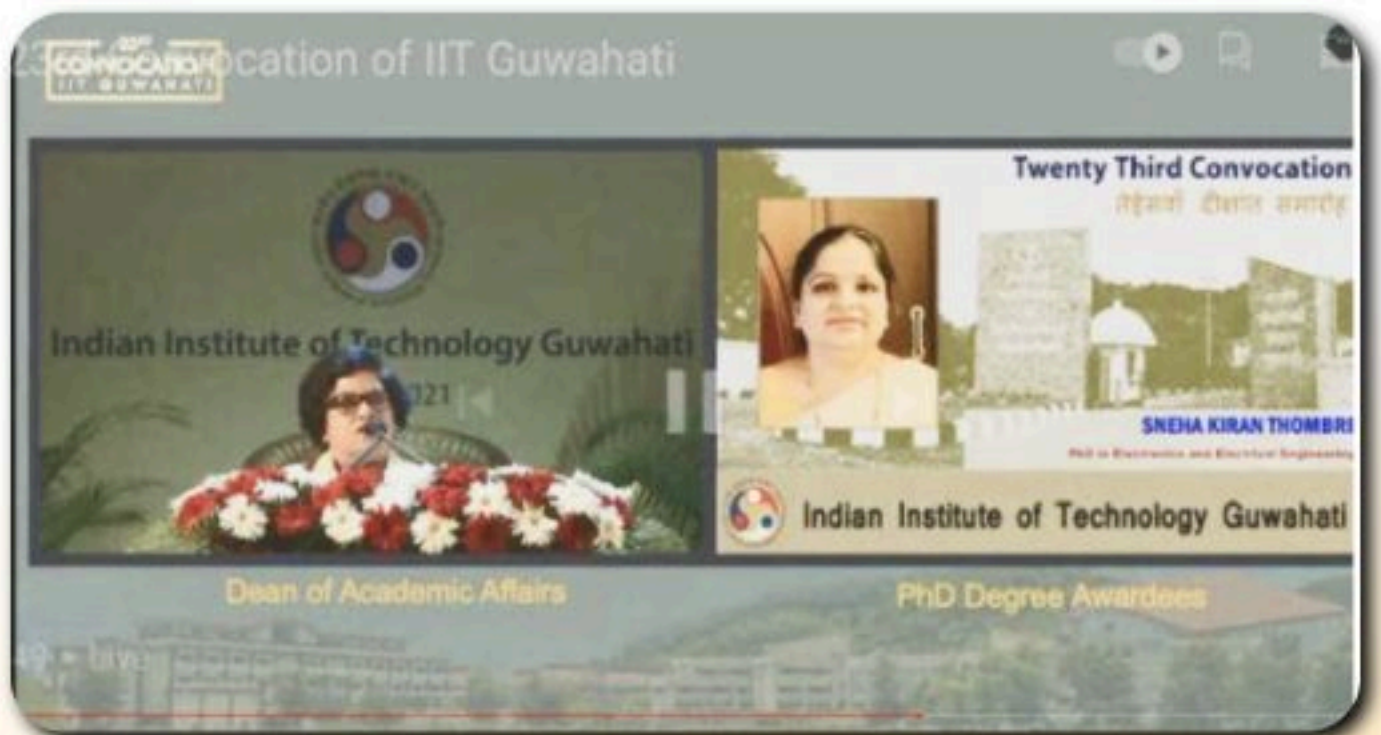


Faculty Achievements

Dr. Anagha Kulkarni received an IBM Research Grant of Rs. 11.91 Lakh for the project "Indian Sign Language Recognition and Translation using Deep Learning and Natural Language Processing"

Brief description:

Indian Sign Language (ISL) is a sign language used by deaf and dumb people in India. Such people need to make signs for communicating with each other. They have their own signs for different words and the Grammar is also different. There are only 10000 words in their vocabulary. It becomes difficult for common people to understand the signs. The system uses the videos of signs as an input and converts to the words that are signed. These words are converted to grammatically correct sentences in English. The system uses Deep Learning and Natural Language Processing approaches for the conversion.



Dr. Sneha Thombre completed her Ph.D from IIT, Guwahati. Her research topic was “Effect of multiplexing TCP flows on delay sensitivity in the internet communications”.

Brief Description: TCP is the dominant protocol in the Internet and delay friendliness of TCP is a well-studied, complex and a practical issue. Despite its importance, TCP flows are not friendly. It has been observed that mean queuing delay for datagrams and average instantaneous delay for datagrams of a typical flow get degraded with the increased number of fellow TCP flows’ in the background traffic. The thesis work proposes a new approach, namely the Link-by-link Congestion Avoidance (LbLCA) algorithm, which works at the network layer, has been proposed. The LbLCA is a proactive congestion avoidance algorithm.



Dr. Dipti Patil received “Best Innovation Award 2020-21” under “SPPU Foundation Day Awards” on 10th February 2021. The award was conferred for designing a “Wireless Body Sensor Network-based Real-Time Healthcare System”. This innovative system has also received a grant of Indian Patent no: 329722.

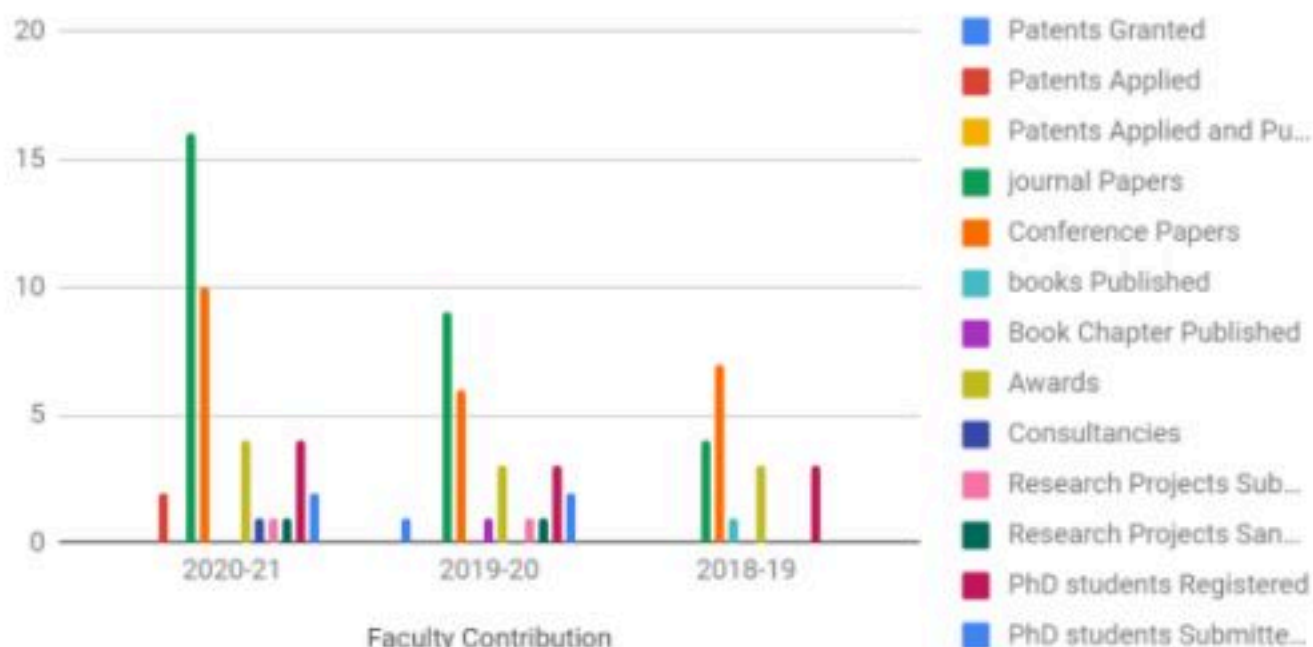


Faculty Research Contribution

The IT faculty is striving hard to strongly contribute to the research domain. Faculty has filed patents, published papers, received research grants, and provided consultancy for agencies like Centre of Police research (CPR). The summary and comparison of the last three years' rising graph of faculty research contribution depicts the same.

Summary of Faculty Contribution (Comparative graph)

2020-21, 2019-20 and 2018-19



Academic Year 2020-21	
Faculty Contribution	Numbers
Patents Applied	2
Journal Papers	16
Conference Papers	10
Awards	4
Consultancies	1
Research Projects Submitted	1
Research Projects Sanctioned	1
PhD students Registered	4
PhD students Submitted Thesis/completed	2



Internship report

This year, our students outdid themselves and made our department proud with their excellent placement record. The highest package was 23 LPA offered by Goldman Sachs. The percentage of students placed was around 86%.

Our students were selected and placed at various sought after companies like Walmart Labs, Goldman Sachs, SAP, Cisco, Micron, CitiCorp, Wells Fargo etc. Many of them were hired as interns in their third year and consequently offered a PPO after their internship owing to their great performance. The average package offered was 10.70 Lakh.

The companies' trust in the college and department is well reflected in the dedication and commitment of the students towards their work.

We aim to better our record in the coming year and will be pleased to inform you about the same.

As per academics, it is mandatory for students to do a summer Internship for the duration of 2 months after completion of sixth semester. The Training & Placement cell provides opportunities to students for

getting an internship, in addition to this, a few internship opportunities are offered at department level.

Faculty from the department continuously monitors the progress of students. At the end of the internship,

students need to take feedback/progress reports from the company for the internship period.

progress reports from the company for the internship period.

They also

submit a report focusing on the knowledge they gain from the internship. Students, who fail to get an

internship

List of companies who hired interns from Department of Information Technology for 2019-20 are:

1. Goldman Sachs
2. Oracle
3. Boeing
4. Barkleys

5. SAP
6. PWC
7. Schlumberger
8. Walmart Labs
9. Mastercard
10. BNY Melon
11. HP
12. Dell
13. Citi
14. Deutsche bank
15. Fiserv
16. NTU, Singapore
17. Persistent
18. Connectwise
19. MITU Skillologies
20. AICTE CISCO

Minnano consultancy, Hackersera, WiDS, My Captain, Alligned, Plute Coder Technologies, Softians Technologies, to name a few.

We are very happy to share, for the Academic year 2020-21, out of 78 students, 77 students got internships at various companies.



THANK YOU !