AN INSIGHT TO THE GIRLS JOURNEY, MIDST THE COVID-19 PANDEMIC

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DIG-IT

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Message from HoD

The academic year 2019-20 ended abruptly due to a pandemic. Staff and students alike were unprepared for the situation. However, within a few days, everyone buckled up and started thinking ahead. It was great to see all the teachers counseling and pacifying students. I am very thankful to the teachers for making immediate provisions for teaching online. The teachers recorded the lectures using online tools. The students, also, adapted well to the situation very quickly and started studying and listening to the online lectures. All in all, it was encouraging to see everyone being hopeful and positive.

This year ended with two positive events in the department – Ph.D. was awarded to Harshad Wadkar and Praful Meshram. Congratulations to Dr. Harshad and Dr. Praful!
Wishing health to all. Hoping that the next academic year will resume very soon.

Dr. Anagha Kulkarni
Head of Information Technology

From Editor's Desk

"Getting there" was always the girls' mantra to be unstoppable. Gaining confidence every day, everyone was creating value for perpetuity. In the hustle and bustle lifestyle, we stepped into a new year with hopes and ambitions to get better, but the unprecedented Covid-19 hit the world, and everything came to a pause.

Ambitions drive everything. In Cummins, we have such "Ambitious Women" who have played a key role in inspiring our next generations to think out of the box and trying to go the extra mile to achieve their goals. The pandemic is the biggest obstacle at the moment, but our teachers and students are ambitious to keep going.

So here in "DIG IT," we are proud to feature and let our ambitious ladies speak their heart about their experiences, challenges, perspectives of finding solutions to the problems at hand, even in the worldwide pandemic.

We hope everyone gets to see that even though in the darkest times, our passion can help us through the most challenging times, and we can indeed find the light at the end!

-Aditi Patil and Simran Thusso
Editors,
DIG IT
IT Department

Faculty Achievements

Even during the lockdown, our teachers didn't stop. Here are some of the achievements of our teachers during 2019-2020

Name of Associated Faculty	Name of the Conference	Title of the Paper
Dr. Dipti Patil	Computing in Engineering and Technology. Advances in Intelligent Systems and Computing	Learning Preferences Analysis by Case-Based Reasoning.
Dr. Dipti Patil	Third international conference on computing and network communications (CoCoNet'19)	5G Enabled Tactile Internet for Tele-Robotic Surgery
Makarand Velankar	ISMIR 2019	Music emotion recognition for film music
Dr. Dipti Patil	Springer's International Conference on Evolutionary computing and mobile sustainable networks (ICECMSN 2020)	Wireless Sensor Networks Optimization using Machine learning to increase the network lifetime
Harshad Wadkar	Fourth International Conference on Information & Communication Technology For Intelligent Systems	Secure Web Browsing using Trusted Platform Module (TPM)

The journey towards WE Local 2020 Engaged Advocate

Dr. Anagha Kulkarni
H.O.D, Information Technology Department

Society of Women Engineers (SWE) has played an important role in my life and in the lives of those who participated in the events planned by the SWE CCEW affiliate. Every single person has been benefitted by being a part of this affiliate.

I was deputed to attend the Society of Women Engineers (SWE) India Symposium at Bangalore in August 2012 by the college. It was during this symposium; I got a chance to listen to great women leaders like Lila Poonawalla and Dr. Tessy Thomas. Thoroughly impressed with their experiences, I realized even such great ladies had struggles in their lives. I understood that it was challenging for them as well to maintain a work-life balance while pursuing their successful careers. I was educated on many day-to-day aspects of a working woman. I decided to spread awareness of common day-to-day problems among working women, especially working mothers. I also decided that it is very important to motivate mothers not to give up their jobs.

Inauguration of the affiliate

The journey towards WE Local 2020 Engaged Advocate

Continued...

In March 2016, the SWE CCEW affiliate was established. I was the Faculty Advisor right from the beginning. I completed my schooling in a small town, Gadhinglaj (Dist. Kolhapur). I was one of the first few girls to join engineering from the town. I had seen the struggles the girls faced to pursue education after 12th. Hence, when I got the opportunity to become the Faculty Advisor, I started nurturing my students and future engineers and working moms. SWE CCEW affiliate organized many programs such as Career Day, many technical and non-technical talks, STEM awareness events for the students. Our efforts were recognized by SWE, Chicago, USA. I was awarded the WE Local 2020 Engaged Advocate Award. The team is honored to accept this award. This award honors the individuals who have contributed to the advancement or acceptance of women in engineering. The individuals could be SWE Affiliate Advisors/Counselors/Entrepreneurs or STEM Professionals. A maximum of 12 awards may be presented annually at a global level. I was truly thrilled to have been recognized as one of the individuals who deserved this award. Hoping that this award will encourage more teachers and students to join the affiliate and contribute actively in the following years.

Science in everyday life – A STEM activity at Mahilashram School, MKSSS

Shagun Sengupta, the Secretary, speaking at WE Local Conference

Our very own "Best Teacher" !

Best teacher award was conferred upon Dr. Dipti Patil (Professional Urban Category)' of Savitribai Phule Pune university foundation day awards 2019-20 from the urban area. The award is conferred by SPPU to the teacher who gives significant contribution in academics, Research, Student development, and Professional development.

The "Best Faculty of the Year"!

Sneha Thombre was awarded the "Best Faculty of the year" under the subcategory Contemporary Subjects/Courses at the CSI TechNext India 2019 - Awards to Academia. This award is basically conferred on those who are ranked best by our committee and jury.

Sneha Thombre has successfully demonstrated innovative and outstanding teaching methodology and has the capability of mentoring and networking academia-industry programs. She has made significant contributions in Research Activity, Industrial Projects, Organising Conference, Seminar, Guest Lectures, etc, and displayed exemplary traits of sincerity, dedication, and hard work making Sneha Thombre eligible for this opportunity.

Student Achievements

Let us have a look at the student's achievements during the Academic year of 2019-20 in Technical and Sports events

Sport Events

Name	Event	Winner Position
Ruchita Herlekar	Rope Mallakhamb competitions	Selected for Zonal
Vaishnavi Khare	Rope Mallakhamb competitions	Selected for Zonal
Sharvari Kandarkar	Rope Mallakhamb competitions	Selected for Zonal

Technicial Events

Name	Event Name	Winner Position
Shravani Chavan	Intercollegiate CodeIt	Winner
Priyal Ekande	Intercollegiate CodeIt	5th Position

IOT IN AGRICULTURE - FERTILIZEROMETER

-Esha Chaugule
TY Information Technology

One of the most talked-about topics in today's media is the distress of Indian farmers. The numerous suicides, low levels of income, and the nation's food providers' below-average living conditions are well known to us. We see protests being staged very frequently.

Indian agriculture is the home of small and marginal farmers. Therefore, the future of sustainable agriculture growth and food security in India depends on small and marginal farmers' performance.

The most crucial cause for our farmers' plight is the failing crops. When I researched the reason for the failing crops, I discovered that fertilizers play a more significant role in growing healthy produce than we might have thought. Fertilizers enhance plants' growth in two ways, the traditional one being additives that provide nutrients. The second mode by which some fertilizers act is to strengthen the soil's effectiveness by modifying its water retention and aeration.

I realized that fertilizers' distribution has to be made according to the crop that needs to be fertilized, the type of soil, and the kind of fertilizer. If this doesn't happen, crops can face problems like yellowing and wilting of lower plant leaves, browning of leaf margins and tips, the crust of fertilizer on the soil surface, black, brown, or rotting roots, slow to no growth, and leaf drop.

The causes of these problems were found out to be a lack of enough education. Studies suggest that about 58% of the farmers cultivating crops don't know about the particular fertilizer being utilized on that specific crop. Excess Amount Fertilizer burn can occur when too much fertilizer is applied, resulting in damage or even death of the plant. A deficient amount could also decrease the crop size and won't provide the required nutrients as much.

So, I created a device called 'Fertilizerometer.'

This device's unique value proposition is that this product provides proper amounts of fertilizers to the required crops. It gives ease in working, and it ensures adequate growth of the crop, without having to worry about the adverse effects of improper fertilization.

By using this product, farmers will be able to provide proper amounts of fertilizers to the required crops. It gives ease in working and ensures adequate growth of the crop, without worrying about the adverse effects of improper fertilization, which may lead to loss of crops, government interference in insurance of the crops, and the farmers' livelihood. Less mental stress on farmers and much healthier crops can result.

I applied for Copyright for this device, and it received a Copyright on the Fourth of July 2019 under the Diary number: 7829/2019-CO/L.

An Experience at the Goldman Sachs Internship

-Yashshree Nigudkar
Final Year, IT Department

I started with my internship at Goldman Sachs at the end of my third year. Goldman Sachs was the first company to visit our campus in 2019, and I was one of the six students selected from Cummins. The internship duration was supposed to be two months but was cut short to 1.5 months due to the pandemic.

Along with that, the internship was entirely virtual. Thus, I missed the feel and experience of the newly developed office in Bengaluru, but the work experience was not compromised. I was in the Securities division (now renamed Global Markets) in the Technology sector. The division's primary focus was to develop technologies for the securities (bonds, deposits, etc., basically equity and debt management) of our clientele. My work was focused on making a dashboard for internal use to expedite problem-solving for our clients. I worked extensively in Java, AngularJS, ChartJS, and database management (we used ElasticSearch, a NoSQL database for the project).

But along with the mentioned technologies, I had to learn testing, quality analysis, and Git, along with many more technologies about other projects of our colossal division. Though I can't divulge my platform's exact nature and work, I can say that I showed different types of graphs, performed various functions and analyses on given data, and showed the data's concise and crux as a visual report on the dashboard. My software is currently used by over 300 people from our Bengaluru and New York offices. Overall, it was a fun and enriching experience at Goldman Sachs. The team that I worked with was fantastic, helpful, and talented. My mentors and buddies were beneficial, and they solved all my doubts and explained to me the company's working. At the end of the internship, my financial and technological skills were much better! Overall, I will cherish the internship memories forever!

Sector Based Trade Recommendation System - CitiBridge Program

-Namita M., Ushakiran V., Sharvari K., Aleena, and Ayesha
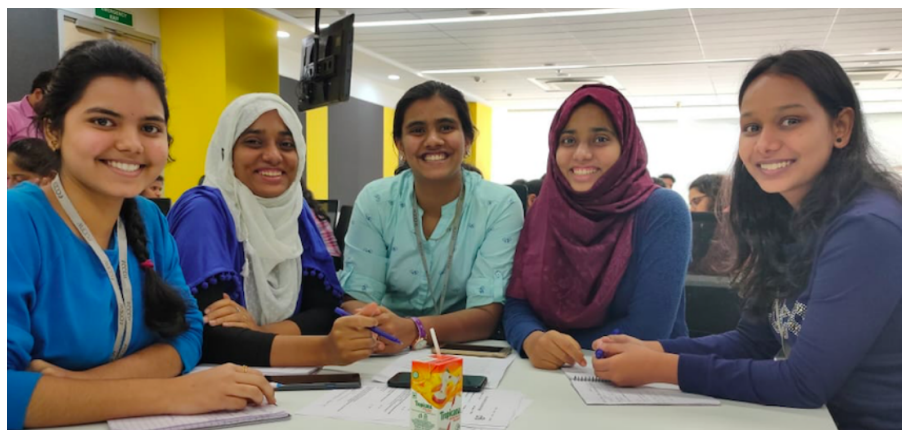
Final Year Engineering

MOTIVATION:

The project discussed in this article is a part of the Citi Bridge Program. The entire program has encouraged and guided us to make the discussed project.CitiBridge is a unique training program conducted by Citi. The objective of the program is to promote women in technology through skill development. The Program aims to promote entry-level women for careers in technology and banking by imparting practical knowledge and industry perspectives from technology experts at Citi. The structured, 100-hour program includes topics such as basics of banking and finance, technology and functional training, professional development, and technical assignments.

Our Incredible Experience :

It is challenging to put this wonderful experience into words, but we will try our best. The first 50 hours included sessions to gain knowledge of different domains conducted by amazing trainers, along with interacting with the leaders and learning a lot from them. Rest 50 hours, we worked on the designated projects. The project has helped us to increase our domain knowledge and skill development. The entire project is explained below. Thanks to the Citi Bridge Team for giving us such an insightful experience. We would like to give our gratitude to Vaishnavi Iyer for mentoring, motivating, and guiding us throughout the project.

<u>The Project</u>

The project consists of the recommendation of stocks on selecting a sector for nifty fifty companies on the basis of the last 2 week's performance. The technology stack used is of Spring Boot, Angular, Firebase. Let us see what these tools are.

Spring Boot is an open-source Java-based framework used to create a micro Service. Micro Service is an architecture that allows the developers to develop and deploy services independently. Handling dependency management is a difficult task for big projects. Spring Boot resolves this problem by providing a set of dependencies for the developer's convenience.

Angular provides an interactive UI with bootstrap and material designs. Angular is a platform and framework for building single-page client applications using HTML and TypeScript.The architecture of an Angular application relies on certain fundamental concepts. The basic building blocks are NgModules, which provide a compilation context for components. NgModules collect related code into functional sets; an Angular app is defined by a set of NgModules.

For the database, no SQL firebase is used. Firebase is a mobile- and web application development platform, backed by Google, to help developers deliver richer app experiences. Firebase manages its own infrastructure with a nice set of tools to simplify the workflow of the developer by providing them with development kits and an online dashboard.

Being a part of this process was a fulfilling experience and was so fun to learn!

The Internships of the Academic Year 2019-20

-Suchitra Morwadkar
Internship Coordinator,IT Department

As per academics, it is mandatory for students to do a summer Internship for the duration of 2-3 months after completion of the sixth semester. The Training & Placement cell provides opportunities to students for getting an internship. In addition to this, a few companies are called at the department level as well. Faculty from the department continuously monitor the progress of students. At the end of the internship, students need to take feedback/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, do a small project under faculty for the said duration. Students with projects at the department, submit small reports on their project.

Statistics:

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

Boeing	Walmart Labs
Eaton	Mastercard
Goldman Sachs	ISCube
UBS	HP
Persistent	Dell
SIEMENS	Citi
Rocket software	Deutsche bank
TIAA	Host analytics
	AlgoAsylum

Minnano consultancy, Marketghost, Goodtech, Ethosh Digital, Vibrant Technologies to name a few.

For the Academic year 2019-20, the internships were not mandatory due to the CORONA pandemic. Out of 79 students, 42 students got internships at various companies. Out of the above-mentioned internships, **13 students performed very well** and converted their internship into **Pre-Placement Offers** in well-established companies like Goldman Sachs, Walmart labs, UBS, SAP, Dell, Citi, and Deutsche bank.

Impact of Internship 2019-20:
Due to the COVID pandemic, an internship was not mandatory for the students. Out of the 42 students who did the internship, 13 students got Pre-Placement Offers. Apart from gaining pre-placement offers, students have been additionally benefited in a variety of ways. They got to implement the theoretical concepts that they have learned to solve industrial problem statements. They also learned new technologies currently being used in the industry. Moreover, they had to program according to the industry standards. This enhanced their range of skillset as well as their quality of work which in turn helped them in cracking their placement interviews and final year projects. Apart from the technical skills, students also got a greater exposure by working in the corporate culture which helped them gain a more professional attitude in corporate environments. Above all, they also got to explore the different roles and responsibilities of professionals in the industry which helped them in making a well-informed decision regarding their career path after leaving college.

Placements

Student Name	Company	Package
Mithapelli Shivani Prabhakar	CISCO	29
Dhande Nehal Mukesh	CISCO	29
Chavan Darshani Sahebrao	CISCO	29
Kotian Rachita Harishchandra	CISCO	29
Badmore Priyanka Pravin	CISCO	29
Chaudhari Kimaya Kiran	CISCO	29
Jalan Srishti Sanjay	Goldman Sachs	22
Kor Akansha Lahu	Goldman Sachs	22
Gavali Esha Rajesh	Goldman Sachs	22
Date Tejashree Vijay	Walmart Labs	18.75
Surse Gayatri Sanjay	Deutsche Bank	14.3
Bothra Nishi Sunil	Citi	13
Singh Abhidha	Citi	13
Chaudhari Shweta Narendra	Shell	12.39
Takalikar Sonal Sunil	Shell	12.39
Rawal Arundhati Pranav	Avaya	12
Baviskar Pratiksha Ravindra	Avaya	12

Internships

Student	Company
Akshita Gautam Chahande	Dell
Aleena Marium	Citi
Avanti Santosh Pophale	Deutsche Bank
Pranjali Ramesh Barve	DELL
Isha Ashish Gawarshettiwar	SAP
Deeksha Satyendra Gupta	Walmart Labs
KOLHE RUTUJA LAXMIKANT	Citi
MAHAJAN SAKSHI BALU	Citi
Sayee Mulkalwar	Walmart Labs
Shivani Mundle	Deutsche Bank
Namita Santosh Mutha	Dell
Yashshree Nigudkar	Goldman Sachs
Rucha Sandip Tatawar	UBS

Department Toppers

Final Year A. Y. 2019-2020 Toppers	
Student Name	CGPA
Jalan Srishti Sanjay	9.31
Bothra Nishi Sunil	9.19
Dhande Nehal Mukesh	9.16
Mithapelli Shivani Prabhakar	9.15
Thora Pihu Nitin	9.14
Singh Abhida	9.1
Date Tejashree Vijay	9.02
Maratkar Prachiti Sadanand	8.86
Chaudhari Shweta Narendra	8.8
Kor Akansha Lahu	8.77