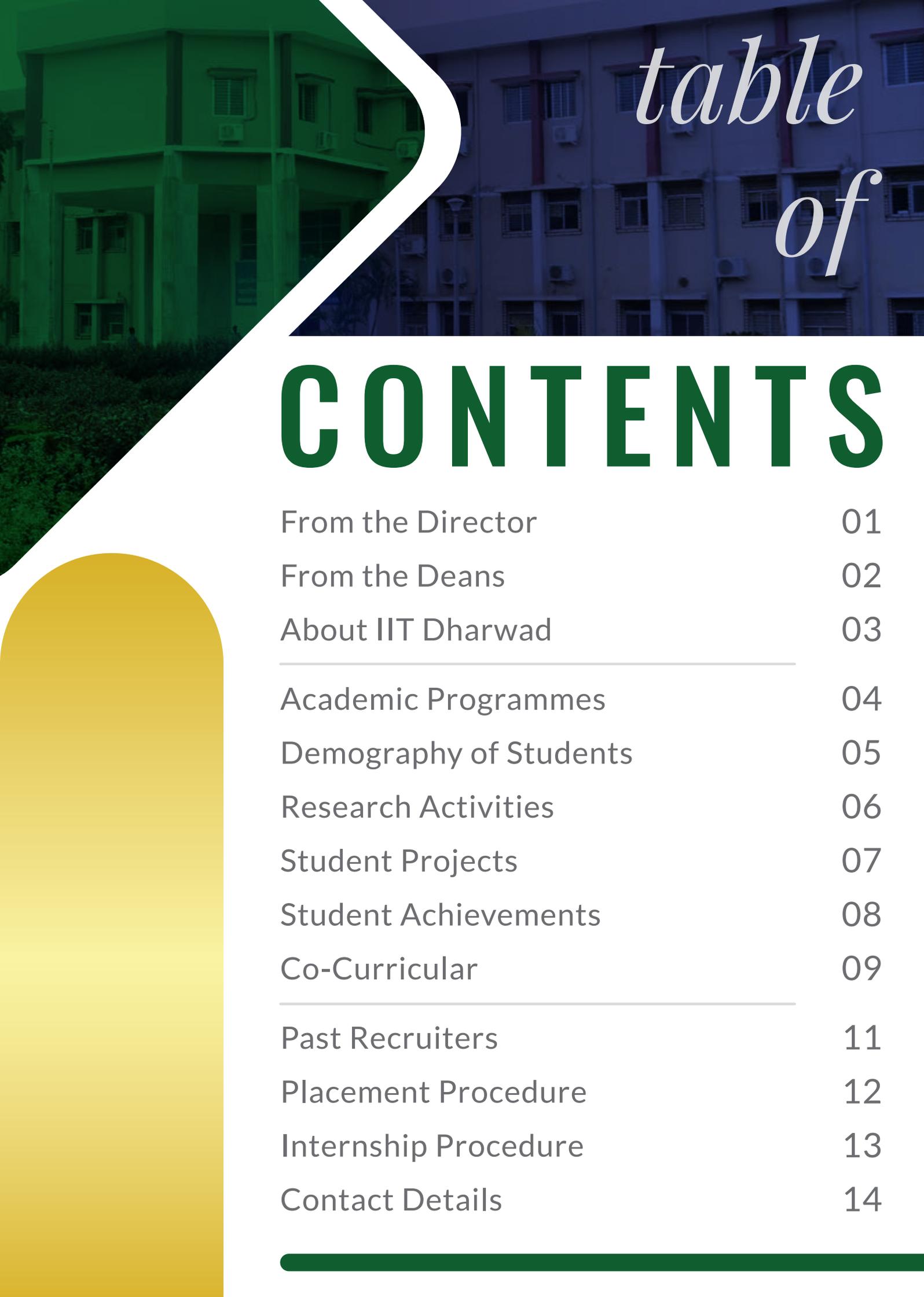॥ सा विद्या या विमुक्तये ॥

भारतीय प्रौद्योगिकी संस्थान धारवाड
Indian Institute of Technology Dharwad

Indian Institute of Technology Dharwad

PLACEMENT
AND INTERNSHIP
BROCHURE
2020-21

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FROM THE DIRECTOR

Prof. P. Seshu
Director
IIT Dharwad

The IITs are synonymous with excellence in our country and are home to some of the finest technical minds from across the nation. We, at the Indian Institute of Technology Dharwad strive to nurture India's leading minds by providing our students with an environment conducive to both creativity and curiosity. IIT Dharwad started in 2016 with 120 students in its B.Tech. program in three disciplines (CSE, EE and ME), and has now grown to house students of B.Tech, MS (three disciplines) and Ph.D. (8 disciplines). We provide each of our students with state of the art equipment and resources, to aid them with our challenging hands-on approach to learning, and to enable them to pursue a wide range of projects. Students are also strongly encouraged to participate in a plethora of cultural and sports activities to strengthen their individuality, build character, and team spirit. Our faculty comprises of both visiting professors from other IITs and permanent faculty of IIT Dharwad ensuring the finest teachers trained from the most reputed Institutes globally, to guide the students.

It gives me immense pleasure to extend a hearty welcome to your esteemed organization for placement of our final year students and internships for pre-final year students. I look forward to seeing your organization here this placement season. You may also be excited to learn about our Co-op program which permits our students to be associated with the industry while still studying in IIT Dharwad. I assure you that our students will add value to your organization, and armed with both, theoretical as well as practical knowledge grow to be the visionary leaders of tomorrow.

FROM THE DEANS

IIT Dharwad's course structure is designed to incorporate a more hands-on approach with the intention to provide students the necessary skills required to contribute to the practical world of engineering. Most courses include "Course Projects" which the students conceive and are then guided by our knowledgeable faculty. Our capable and enthusiastic students contribute to their peers' learning, acting as Teaching Assistants, and even writing manuals for new courses or making changes to pre-existing ones. As an infant IIT, students form committees to improve their academic productivity and "college experience". Thus, collectively working through their strengths, covering their peers' weaknesses, and turning them into strengths. I look forward to your participation hoping that your visit shall begin a promising and an everlasting relationship between the Institute and your organization.

Prof. S.V. Prabhu
Dean of Academic Programmes
IIT Dharwad

Prof. Mahadeva Prasanna
Dean of Research & Development
IIT Dharwad

The Research and Development (R&D) section of IIT Dharwad is actively working towards bringing up a vibrant research and development culture. These include coordinating with funding agencies in securing sponsored projects, consultancy projects and offering specialized in-house courses for industry personnel. Industry academia linkage is being established by conducting Development of Industry and Academia Linkage (DIAL) days. Within a short span of time, our young and dynamic faculty members have secured several funded projects worth 6 cr. The R&D section is also coordinating with reputed universities and industries, India and abroad for collaboration. Already many MoUs have been signed with many organizations and the collaboration has started.

ABOUT IIT DHARWAD

Indian Institute of Technology Dharwad (IIT Dharwad), established in 2016 as an autonomous institute of national importance in Science and Technology by the Ministry of Education, Government of India, aims to produce experts of fundamentals who will reach the pinnacle of whichever field they journey into.

Presently the institute offers UG and MS program in computer science and engineering, electrical engineering and mechanical engineering. Doctoral programs are also offered in various fields. The institute believes that knowledge liberates and hence provides an environment which helps students gain knowledge of a variety of fields. The institute thus, promotes a plethora of extra-curricular programs and sports activities which provide the students with the skills to achieve professional competence.

In order to provide guidance and invaluable support to the student community, both academically and non-academically and facilitate them with academic, personal and social growth, IIT Dharwad has in place a student mentorship programme. It acts as a bridge connecting the freshmen and seniors, enabling mutual development and holistic learning.

The institute believes that not just mere knowledge but also suitable application is what builds achievers, and thus the institute lays emphasis on research and entrepreneurship and motivates the the students to recognize their true potential and become industry ready.

ACADEMIC
programmes

The academic programmes of IIT Dharwad take the initiative to nurture and provide a holistic environment to facilitate the growth of its students. IIT Dharwad being a mentee of IIT Bombay follows its mentor's academic curriculum. We have an academic program that provides a myriad of opportunities that ensures its students are technically proficient, dexterous entrepreneurs, astute, and highly skillful to be pioneers at whichever field they wish to venture into. IIT Dharwad offers B.Tech., M.S., and Ph.D. programmes in the following three streams of engineering.

Department of Computer Science and Engineering

This department has existed since the inception of IIT Dharwad. Since the institute lays emphasis on learning by doing, there is an adequate number of lab courses to provide hands on experience to the students. The curriculum consists of a unique blend of courses covering fundamentals in computer science along with advanced topics aligned with distinct research areas of our faculty. Our faculty research broadly includes, theory (logic, graph theory), systems (computer architecture, computer networks, parallel programming), intelligent systems (ML and AI) and in interdisciplinary areas such as cyber physical systems, smart grids, which involve a wide range of problems related to data science, machine learning, distributed processing, security, etc

Department of Electrical Engineering

This department emphasises primarily on the fundamentals of building physical devices and exploring the mathematical aspects of EE. With faculty from multifarious research backgrounds, the department is an incubator for multi-disciplinary research allied with computer science, applied physics, biotechnology, chemistry and computation. The faculty members are actively working and collaborating with numerous industries and academic institutions worldwide in the areas of next generation wireless communication such as IoT, 5G and beyond, communication networks, performance modeling, resource allocation, sensors, circuits and devices, control engineering, machine learning and deep neural networks, signal processing, power systems and power electronics.
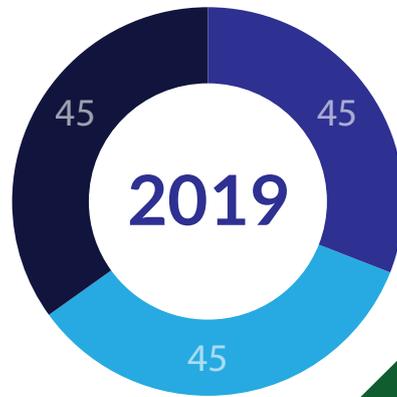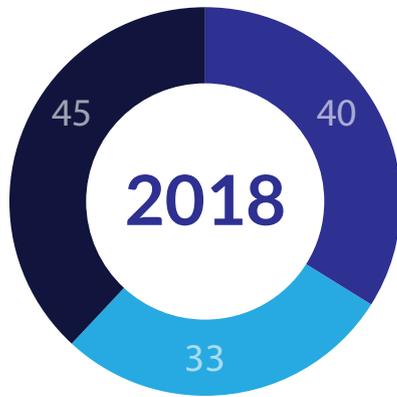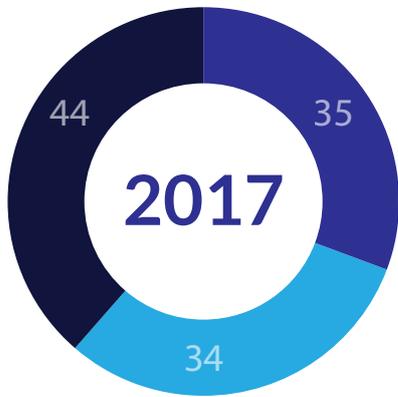
Department of Mechanical Engineering

The department's curriculum is an assemblage of core mechanical engineering, basic sciences and interdisciplinary courses backed by an array of hands-on laboratory courses. The curriculum is well tailored to fit the requirements of industry 4.0 and to promote practice-oriented learning along with conceptual understanding. The faculty of the Department come from a wide-ranging academic background and work on an expansive list of core and interdisciplinary research areas as well as local problems such as energy technologies for sustainable environment, healthcare and agricultural technologies, and other key needs of the nation.

DEMOGRAPHY
of students

2017
44
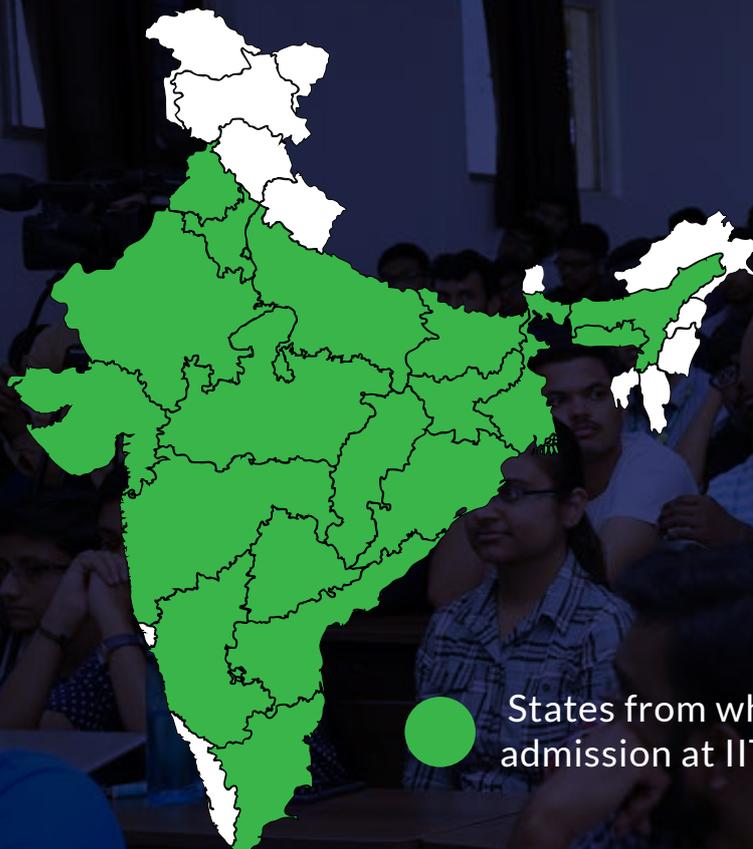35
34

2018
45
40
33

2019
45
45
45

B.Tech Branch Distribution

- ● Computer Science & Engineering
- ● Electrical Engineering
- ● Mechanical Engineering

MS
02
03
02

*MS was introduced in 2019

● States from where students took admission at IIT Dharwad in 2017

RESEARCH
activities

IIT Dharwad gives immense importance and attention to academic and research development. These are some of the competent research done by our students which had notable impact on Technologies and were published in best conferences/journals.

- Semi-automated detection of air bases in satellite images using Deep Convolutional Neural Networks, IEEE 9th International Advance Computing Conference, 2019 - (Prateek Jain).

- Language Specific Information From LP Residual Signal Using LInear Sub Band Filters, National Conference on Communications, 2020 - (Soma Siddhartha).

- Experimental Exploration of Compact Convolutional Neural Network Architectures for non-temporal real-time fire detection,International Conference on Machine Learning and Application (ICMLA) - (Ganesh Samarth).

- A Hybrid Numerical-Analytical Technique in Elastostatics, INCAM 2019 at IISc Bangalore & ICRACEM 2020 at IIT Kharagpur - (Yogesh S Thube).

- Use of Origami for Solar Energy Harvesting - (J Swapnik).
  Publication: Advances in Solar Energy Research, Springer Publications, ISBN 978-981-13-3302-6

- On Preamble-based Grant-Free Transmission in Low Power Wide Area (LPWA) IoT Networks, IEEE World Forum on the Internet of Things (WFIoT2020) - (Mrinal Rana & Harini G.S)

- MTFeeL: Multi Task Federated Edge Learning - (Sawan Singh Mahara and Shruti M).

- Numerical modelling of hydraulic fracture using Element Free Galerkin Method - (S K Lohit).

- Analysis of Networked Control System with Communication Constraints - (Balbheem N).

student
PROJECTS

Some of the major projects which the students worked on are as follows:

Reliability study of Deep Neural Networks (Bodavula Rup Tirumal Sai)
The project deals with a detailed characterization study of the possible attacks like adversarial attacks on the existing neural networks and finds ways to mitigate them.

Design and Fabrication of Wind Turbine in campus (Anurag Arjunan)
Optimized the design parameters based on wind behaviour and fabrication feasibility of the wind turbine. A prototype was built, its performance was analyzed and the trends of non-dimensional entities were compared with those in existing research papers.

Smart Closet (Ritvik Chebolu, Vinay Naidu, Tejaswi Vykuntam, Subhamoy Rana)
Designed a smart closet with an Arduino controlled dehumidifier, along with a UV-C illuminated bulb to dry the wet clothes and have a germicidal effect on the disease-causing bacteria in order to save space and making indoor clothes drying safer. This has a safety lock, we can have an IR/UV sensor at the door to turn off the UV lamp.

Selective determination of ammonia, ethanol and acetone by reduced graphene oxide based gas sensors at room temperature (Raj Kumar)
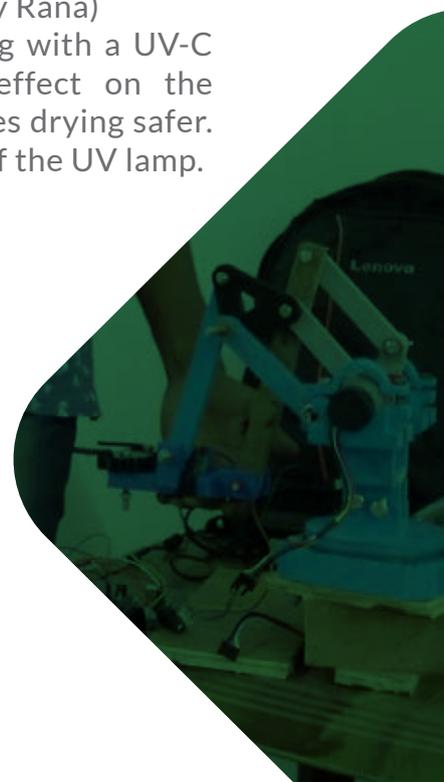
Body Posture Contraption
(Abhishek Kalokhe, Gagan GB, K Pranay, Rohan Savakar)
An Arduino based prototype which can recognize and correct a person's forward slouch. The device is concealable in a jacket and is helpful in prevention of the long term effects of slouching.

Online stabilization of IEEE 39 bus power system using phase sequence exchange technology (Nitesh Singh)

C3i Monitor, C3i Lab, IIT Kanpur (Arpit Agrawal)
C3i monitor is a tool which maintains data about the state of IPv4 Internet Protocol Addresses across India. After viewing the reports provided by the tool, an IP address can be manually marked as vulnerable.

student ACHIEVEMENTS

Inter IIT Tech Meet 8.0, Schlumberger's Coding Hackathon: Gold Medal
(Srishti Srivastava, Charu Agarwal, Aman Luthra, Sonu Sourav)

Inter IIT Tech Meet 8.0, DRDO's UAV Fleet Challenge: Fourth Position
(Sohan Anisetty, Rishabh Tripathi, Akhil Manoj, Rushikesh Dixit, Aman Singal, Sameer Dohadwalla, Akhilesh Bharadwaj, Shreyas Sathe, Rishit Saiya)

ACM ICPC 2019: Regional Level at Amritapuri
(Harsh Raj, Rupesh Kalantre, Prabhakar Jha, Amogh Dasture)

Inter IIT Tech Meet 7.0, Jio's Coding Hackathon: Fourth Position
(Prateek Jain, Arpit Agrawal, Sonu Sourav, Ojas Raundale)

Inter IIT Cultural Meet, Creative Writing Competition: Gold Medal (Sameer Dohadwalla)

Smart India Hackathon, Software: Second Position
(Dadhaniya Rutik Rajeshbhai, Dhruv Jain, Akhilesh Bharadwaj, Rajat Tyagi, Shreyas Sathe, Meghana Singamaneni)

Embedded Security Challenge, Indian edition of CSAW'19, held at IIT Kanpur: Third Position (Arpit Agrawal, Rohan Shrothrium, Jay Garachar, Anudeep Tubati)

TCS Tech Bytes, IT Quiz: Second Position
(J Swapnik, Gautam Jagdhish)

SAMHAR COVID-19 Hackathon by CDAC & NVIDIA: Under top 25 teams of India (Prateek Jain, Ganesh Samarth C. A., S V Praveen, Mandeep Bawa, Anudeep Tubati)

Devhack 2.0, Hardware: First Position
(Thummala Divisha Lakshmi, Gandra Joshitha, Vaishnavi Sameer Patil, Eega Sai Priya)

Three of our Computer Science Undergraduates got selected into the coveted GSoC Program

Apart from these, the students of our institution have performed exceptionally in numerous hackathons.

CO-CURRICULAR

The institute recognizes the need for co-curricular activites to go hand in hand with academics. In the pursuit of building future leaders the institute encourages the holistic development of the students, and this belief of the institute is well evident from the number of student clubs which are functional here. Students are given the freedom to come up with any innovative club and some amongst the numerous clubs resulting from this are:

Rhapsody: Rhapsody, the music club of IIT Dharwad, is the oldest club which resonates with the musical spirit of the city of Dharwad. It aims to nurture the musical talent in every member and provide a conducive environment for mutual learning.

Quiz club: The quiz club offers a unique and exciting way to motivate and encourage students in their quest of knowledge and provides an opportunity to celebrate their achievement.

Aesthetica: Aesthetica, the fine arts club of IIT Dharwad, helps the students explore and nurture their artistic side. The club organizes various contests and also participates in events such as Inter-IIT cultural meet, SPIC MACAY, etc.

Eunoia: Eunoia, the literary club was founded with the intention of promoting the literary arts in our college by organising many fun events such as mock parliament, poetry slam , open mic, etc. The club inspires students to expand their horizons of spoken and written language and develop a taste for literature.

Udghosh: Udghosh, the Dramatics Club of IIT Dharwad, conducts various events like stage play, street plays, etc. Though in its nascent stage, Udghosh has managed to bag 6th rank in the Stage Play competition in the 4th Inter IIT Cultural Meet

Sports

IIT Dharwad offers National Sports Organization (NSO) course for first year students in Athletics, Basketball, Cricket, Football, Hockey, Table Tennis, Tennis, Volleyball and Yoga. The NSO program is an audit course, which is an academic requirement need to be passed by all the first year students. The institute has decent sports infrastructure in its transit campus.

IIT Dharwad's sports contingent has been participating in the Inter IIT Sports Meet since 2016, having secured its first medal in Para-power lifting in 2018. This year, IIT Dharwad with a strong contingent of 87 players participated in the ensuing 54th Inter IIT Sports Meet held at IIT Kharagpur and IIT Bhubaneswar in the month of December 2019 and gave a tough and competent fight against the well established teams of old IITs. A contingent of IIT Dharwad also competes at Aavhan, the sports festival of IIT Bombay every year.

PARSEC

The annual technology festival of IIT Dharwad, aims to bring together the unparalleled experience of magnificent technologists and the innate curiosity of passionate students by providing a common platform to showcase their expertise and hone their skills.

Open Student Society

Open Student Society(OSS) is a community for students to join together to develop, innovate, share and grow together as a community. OSS welcomes students, from all branches and walks of life, to participate and contribute.

Li-ion

The club brought together like minded students from different streams with the motivation of bringing out new technologies and research in the field of electric vehicles.

InGene

InGene Motorsport was initiated to promote projects and activities related to the Automotive domain in IIT Dharwad. Their aim is to design, manufacture and race a Formula-style vehicle to compete with other universities at national & international competitions. InGene provides a platform for students to showcase and hone their engineering skills.
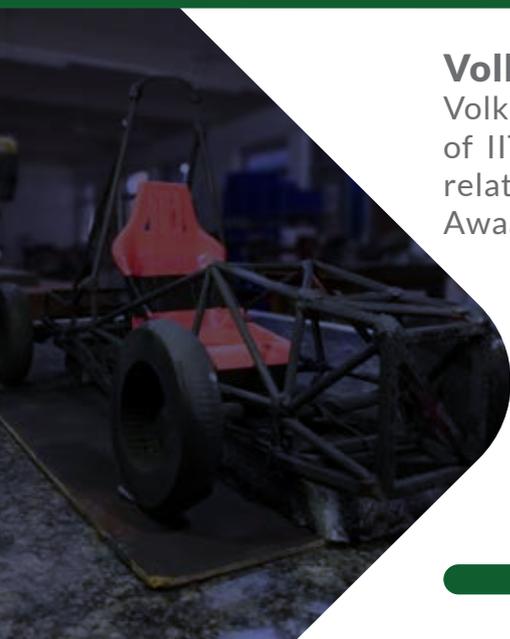
Volksstimme

Volksstimme,IIT Dharwad is the Media Body run by students of IIT Dharwad which encompasses the issues and events related to IIT Dharwad. It was started under the guidance of Awaaz, IIT Kharagpur.

IIC (Institute Innovation council)

It is a body which conducts various innovation, entrepreneurship related activities and aims to systematically foster the culture of innovation in IIT Dharwad. It organizes various seminars, interactions with the professionals, hackathons and nurtures the spirit of entrepreneurship in our institite.
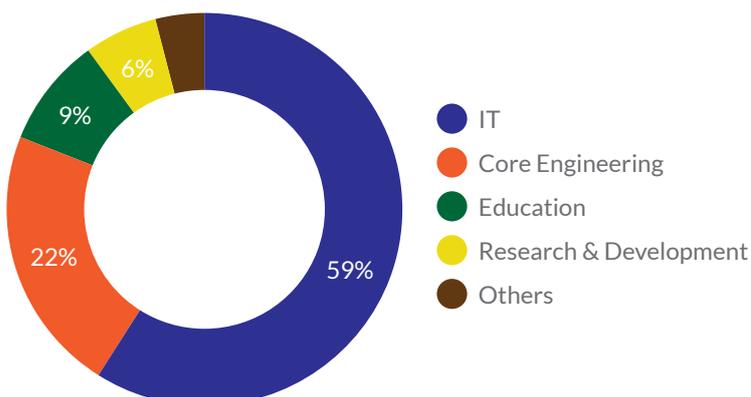
RECRUITERS

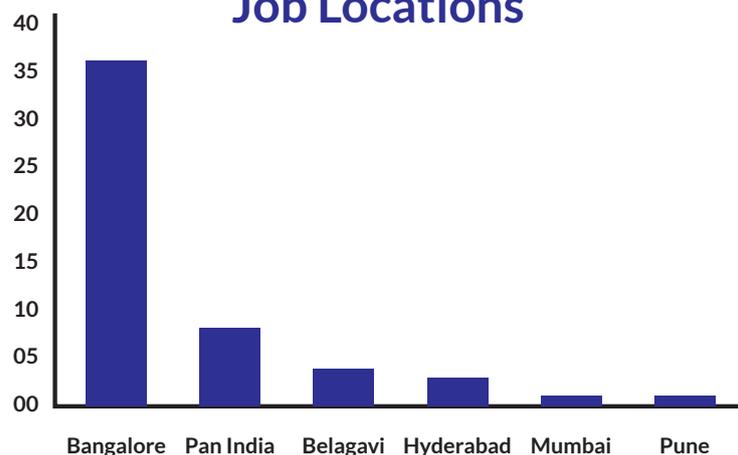## Some of our key recruiters

List of recruiters

- Aequs Aerospace
- Air Asia
- Ajirasoft
- Broadridge
- Cognizant
- Deevia
- Express Analytics
- G7 CR Technologies Pvt Ltd
- ITI Limited
- K12 Techno Services Pvt Ltd
- L&T ECC
- MAQ Softwares
- MBB Labs
- McAfee
- Microsoft
- MMRFIC Technology Pvt Ltd
- Nasdaq
- RAAM
- Sohum Innovations
- TCS R&I
  and many more...

Domain-wise Profiles Offered

- IT
- Core Engineering
- Education
- Research & Development
- Others

59%
22%
9%
6%

Job Locations

Bangalore Pan India Belagavi Hyderabad Mumbai Pune

40
35
30
25
20
15
10
05
00

PLACEMENT
procedure

01

Career Development Cell (CDC) sends invites to the companies with relevant information and links.

02

Interested companies fill the Job Notification Form (JNF) which is given on the CDC website.

03

The resumes of all interested and eligible students are made available to the interested companies and they further may conduct pre-placement talks at the institute.

04

Online tests and telephonic interviews are conducted by the companies in order to shortlist the students.

05

CDC provides the companies with recruitment dates (start of the recruitment session). Companies visit the campus on allotted dates and conducts the interview of the shortlisted students.
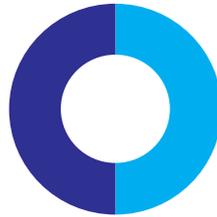
06

Companies provides the final list of the selected students and CDC coordinates by signing off the offer letters of the selected students.

INTERNSHIP
procedure

01

Career Development Cell (CDC) sends invites to the companies with relevant information and links.

The interested companies fill out the Internship Notification Form (INF) present on the CDC website.

02

The companies conduct its internship selection procedure. A list of selected interns along with their offer letters is sent to the Internship Wing of the Career Development Cell.

04

03

The details regarding the internship are conveyed to the students. A list of interested and eligible students is made available to the companies.

The companies are requested to fill a feedback form on the student's performance after the Internship.

06

05

The students are finalized and the companies receive a confirmation from CDC about the intern.

CONTACT *details*

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CAREER DEVELOPMENT CELL

|| सा विद्या या विमुक्तये ||
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Indian Institute of Technology Dharwad

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