LBS College of Engineering

ACTIVITY REPORT 2022-23

Submitted by

IEDC Team, LBSCEK

under the guidance of

Sarith Divakar M.

to

Kerala Startup Mission
in completion of academic year 2022-23

KERALA
STARTUP MISSION®

Vision of the Institute

To become a paragon institution for pursuance of Education and Research in Engineering and Technology

Mission of the Institute

•Impart finest quality Technical Education and Training
•Nurture a vision of Sustainable development
•Bequeath it to the next generation of professionals

LBS College of Engineering, Kasaragod
March 2023

DECLARATION

We hereby declare that, this activity report is the bonafide documentation of the various ventures undertaken by the Innovation and Entrepreneurship Development Centre in the academic year 2022-23 carried out under the supervision of **Sarith Divakar M**, IEDC Nodal Officer, Dept. of Computer Science and Engineering, LBS College of Engineering, Kasaragod

Sreenivas Pai Kottachery
IEDC Chief Executive Officer (2022-23)
Student, Electronics &
Communication Batch of 2019-23

Sarith Divakar M
IEDC Nodal Officer
Assistant Professor,
Dept of Computer Science and Engineering

Dr. Mohammad Sekoor T.
Principal
LBS College of Engineering, Kasaragod.   Date: 04/03/2023

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IEDC Team 2022-23

Sl. No	Name	Execom Role
1	Sreenivas Pai K	Chief Executive Officer
2	Varun Vinay	Chief Operations Officer
3	Abhishek Gopal	Chief Technology Officer
4	Althaf Roshan R	Chief Financial Officer
5	K K Sukanya	Chief Strategy Officer
6	Yadukrishna E P	Member
7	Thabsheera C K	Member
8	Jarosh Antony	Member
9	Chavan N J	Member
10	Ashik M	Member
11	Abhishek Gopinath	Member
12	Abhishek Ballullaya K	Member
13	Swathi K	Member
14	Vaishnavnath M	Member
15	Dilsha P	Member
16	Ranin Fathima P	Member
17	Ayana Prakash P S	Member
18	Vaishnavnath M	Member
19	Sreedeep C V	Member
20	Sreya E P	Member
21	Sooraj P	Member
22	Sajay P K	Member
23	Ali Al Jafar	Member
24	Fathima Nida Thaj T.P	Member

ACKNOWLEDGEMENT

 We take this opportunity to express our deep sense of gratitude and sincere thanks to all who helped us in all our programs and initiatives.

 We are deeply indebted to our nodal officer **Mr. Sarith Divakar M,** Assistant Professor**,** Department of Computer Science and Engineering for his excellent guidance, positive criticism and valuable comments. His never-ending support and enthusiasm has brought us where we are now. We are greatly thankful to our KSUM IEDC coordinator **Mr. Bergin S Russel** for their constant support and guidance. We are greatly thankful to **Shri. Anoop Ambika**, CEO, Kerala Startup Mission, for his support and cooperation.

Finally, thankful to one and all former members of IEDC, our Alumni Network and our friends who directly and indirectly contributed to the successful completion of this Academic Year 2022-23.

Place: Kasaragod

Date: 04/03/2023

Sreenivas Pai K

CEO, IEDC LBSCEK

CONTENTS

Contents

CHAPTER 1
INTRODUCTION

The Innovation and Entrepreneurship Development Centre (IEDC) is being promoted in educational institutions to develop institutional mechanisms for creating an entrepreneurial culture in academic settings and fostering techno-entrepreneurship for the generation of wealth and employment. The mission of the IEDCs is to 'develop institutional mechanisms to create an entrepreneurial culture in academic institutions to foster the growth of innovation and entrepreneurship among faculty and students. As part of the Kerala Startup Mission, the IEDC was established at L B S College of Engineering in 2016.

Objectives of the IEDC

- Serve as an institutional mechanism offering diverse services, including guidance on all facets of establishing enterprises
- Foster an entrepreneurial ethos within the Parent Institution and neighbouring establishments in the region
- Instil a culture of innovation-driven entrepreneurship through student projects
- Address emerging challenges and opportunities pertaining to Small and Medium Enterprises (SMEs) and micro-enterprises with agility and efficacy

Functions of IEDC

- Host workshops like Entrepreneurship Awareness Camps, Entrepreneurship Development Programs, Faculty Development Programs, and Skill Development Programs
- Facilitate interactions between entrepreneurs and students, establishing mentorship programs for student entrepreneurs.
- Advocate for the importance of entrepreneurship to the institution's management, integrating entrepreneurial activities with the host institution's operations.
- Spreading awareness about entrepreneurship to nearby schools and polytechnics.

The IEDC LBS conducts various programs such as idea pitching, workshops, hackathons, etc., to enhance students' skills. Additionally, it facilitates interactions with entrepreneurs, allowing students to discuss their questions and ideas about startups.

CHAPTER 2
EVENTS ORGANISED

Sl. No.	Academic Year	Date	Name of the Programme
1	2022-23	25-7-2022	Meet the mentor
2	2022-23	25-7-2022	Idea pitching
3	2022-23	27-10-2022	Design and Engineering workshop
4	2022-23	4-11-2022	Machine learning application development workshop
5	2022-23	18-11-2022	Machine learning application development workshop
6	2022-23	25-11-2022	Hadoop in Google Cloud Platform
7	2022-23	28-11-2022 & 29-11-2022	Workshop on Python programming
8	2022-23	7-12-2022	Institutional Entrepreneurship Awareness Programme

Meet the mentor

The IEDC Meet the Mentor session held on 26-July-2023 served as a platform for budding entrepreneurs to interact with Aishwarya Lakshmi, Technology Fellow, KSUM. Aishwarya Lakshmi provided an overview of the IEDC, emphasizing its role in nurturing innovation and entrepreneurship among students and aspiring entrepreneurs. She highlighted the various programs, resources, and opportunities offered by IEDC to support budding entrepreneurs. Sayyid Sawad commenced his talk by providing an overview of the startup ecosystem, emphasizing the importance of innovation, market research, and scalability. He highlighted the role of KSUM in supporting startups and fostering entrepreneurship in Kerala.

Idea pitching

The Idea Pitching Session held on July 25, 2023, marked an inspiring congregation of budding entrepreneurs, mentors, and investors. Various teams showcased their groundbreaking startup projects, emphasizing uniqueness, potential impact, and technical feasibility.

Highlights:

Diverse Idea Presentations:

The session commenced with an array of presentations, each exuding creativity and vision. From sustainable energy solutions to AI-driven healthcare innovations, the spectrum of ideas was diverse and promising. Teams articulated their concepts with clarity, outlining market potential, target demographics, and competitive advantages. The presentations were a testament to the entrepreneurial fervor permeating the startup ecosystem.

A common thread among all presentations was the emphasis on uniqueness and impact. Teams strived to offer solutions that not only addressed existing challenges but also carved new pathways for progress. Innovations ranged from Alzheimer's Disease Detection to Presence Detection Sensor based systems. Each idea aimed to disrupt conventional paradigms and foster sustainable development. Technical feasibility emerged as a crucial aspect of evaluation. Teams demonstrated meticulous planning, outlining the technical architecture and potential scalability of their solutions. From prototype demonstrations to feasibility studies, presenters underscored their commitment to transforming ideas into tangible realities. The emphasis on robust technical foundations instilled confidence among the mentors.

Funding Allocation by IEDC:

A pivotal moment of the session was the allocation of funding by the Innovation and Entrepreneurship Development Cell (IEDC). Based on project evaluations and mentor recommendations, select teams were awarded funding to catalyze their ideas.

Allocation Details:

Alzheimer's Disease Detection System using Deep Learning
- Team Leader: Muhammed Sha A Lan Cse
- Guide: Binsiya P N

Learning Platform for Autistic Students

- Team Leader: Varun Vinay, CSE

- Guide: Dr. Vinodu George

Students Performance Analysis Using Machine Learning

- Team Leader: Lince Mathew, CSE

- Guide: Dr. Praveen Kumar K

Presence Detection Sensor

- Team Leader: Navaneeth, ECE

- Guide: Prof. Nisha

Conclusion:

The Idea Pitching Session of July 25, 2023, epitomized the dynamism and ingenuity inherent in the IEDC ecosystem. From idea inception to funding allocation, the event showcased the collaborative spirit of students and mentors in shaping a better future. As these teams embark on their journey, fueled by innovation and determination, they stand poised to redefine industries and uplift communities.

Design and Engineering workshop

A comprehensive Student Induction Programme was conducted on October 27, 2022 as part of the Design and Engineering Workshop, facilitated by Mr. Ajin Omanakuttan. The purpose of the workshop was to introduce new students to the principles, methodologies, and expectations of the design and engineering field, providing them with a solid foundation for their academic and professional journey. A comprehensive introduction to the principles, significance, and applications of design and engineering was presented, highlighting its role in various industries and everyday life. Several interactive sessions were conducted to engage students actively

in problem-solving activities, encouraging them to apply theoretical concepts to practical scenarios. Real-world case studies were presented to illustrate the application of design and engineering principles in addressing complex challenges across different domains. To promote collaboration and teamwork, students participated in team-building activities aimed at enhancing communication, cooperation, and collective problem-solving skills. Mr. Ajin Omanakuttan concluded the workshop by summarizing key takeaways and encouraging students to apply the knowledge and skills gained during the session to their academic and professional pursuits.

Machine learning application development workshop Part 1

The Machine Learning Application Development Workshop Part 1 is an initiative aimed at equipping participants with practical knowledge and skills in machine learning (ML) application development. Hosted at the SDPK LAB, this workshop is organized by the collaborative efforts of the Innovation and Entrepreneurship Development Cell (IEDC) and the Institution's Innovation Council (IIC). Sarith Divakar M, the facilitator, commenced the workshop with an insightful introduction to machine learning. The session covered fundamental concepts such as supervised and unsupervised learning, classification, regression, and clustering. Participants gained a clear understanding of the basics of ML. Following the theoretical introduction, participants engaged in hands-on learning sessions. Practical exercises and demonstrations were conducted to teach attendees how to implement ML algorithms using popular Scikit-learn framework. This segment allowed participants to apply theoretical knowledge in real-world scenarios. The workshop explored various real-world applications of machine learning, providing participants with valuable insights into how ML is used in natural language processing, image recognition, recommendation systems, and predictive analytics. Case studies and examples were shared to illustrate the practical relevance of ML in different domains.

Instagram: https://www.instagram.com/p/CkbhPdWy2UU

Machine learning application development workshop Part 2

The Machine Learning Application Development Workshop Part 2, focusing on Deep Learning, took place on November 18, 2022, at the SDPK LAB. The workshop was meticulously organized by the Innovation and Entrepreneurship Development Cell (IEDC) and the Institution's Innovation Council (IIC), aiming to provide participants with a comprehensive understanding of deep learning concepts and their practical applications.

Workshop Highlights:

Sarith Divakar M commenced the workshop with an in-depth exploration of deep learning fundamentals. Participants were introduced to neural networks, activation functions, backpropagation, and other essential concepts that form the backbone of deep learning algorithms.

Hands-on Sessions: The workshop featured hands-on sessions where participants had the opportunity to implement deep learning algorithms using frameworks such as TensorFlow and Keras. Practical exercises and coding demonstrations enabled attendees to gain practical experience in building and training neural networks for various applications.

Advanced Deep Learning Techniques: In addition to covering basic concepts, the workshop delved into advanced deep learning techniques. Topics such as convolutional neural networks (CNNs) for image recognition, recurrent neural networks (RNNs) for sequence data, and generative adversarial networks (GANs) for image generation were discussed, providing participants with a deeper understanding of the diverse applications of deep learning.

Real-world Applications: The workshop emphasized the practical applications of deep learning across various domains. Case studies and examples were shared to showcase how deep learning is used in areas such as computer vision, natural language processing, healthcare, and finance. Participants gained insights into how deep learning algorithms are transforming industries and solving complex problems.

Project Development: A significant portion of the workshop was dedicated to project development. Participants worked on mini-projects, applying the concepts learned during the workshop to solve real-world problems or develop prototype deep learning applications. Mentors provided guidance and support to help participants navigate the project development process.

Conclusion:

The Machine Learning Application Development Workshop Part 2 - Deep Learning was a resounding success, providing participants with valuable knowledge and practical skills in deep learning. Through theoretical sessions, hands-on exercises, advanced techniques exploration, real-world applications, and project development, attendees gained a comprehensive understanding of deep learning concepts and their practical implementation. The workshop not only enhanced participants' technical capabilities but also fostered collaboration and networking among like-minded individuals interested in deep learning and its applications.

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Introduction to Hadoop on Google Cloud Platform

The "Introduction to Hadoop on Google Cloud Platform" workshop, organized by IEDC, was expertly conducted by Amulya S J, Athira C, and Sreeradha M. Their combined knowledge and expertise in the field provided participants with an enriching learning experience, guiding them through the fundamentals of Hadoop and its implementation on Google Cloud Platform (GCP). The event featured discussions, practical demonstrations, and hands-on activities to familiarize attendees with the key concepts and tools involved. The workshop began with an introduction to Hadoop, emphasizing its role in processing and analyzing large datasets. Concepts such as Hadoop Distributed File System (HDFS) and MapReduce were explained to provide

a foundational understanding. Following the Hadoop overview, the focus shifted to GCP and its services relevant to Hadoop deployments. Real-world case studies and examples were presented to illustrate the use of Hadoop on Google Cloud Platform across various industries and applications. Attendees gained insights into how organizations leverage these technologies to derive actionable insights from their data.

Conclusion:

The session conducted by Amulya S J, Athira C, and Sreeradha M provided participants with a solid foundation in Hadoop and its implementation on Google Cloud Platform. Their expertise, coupled with engaging delivery and interactive elements, ensured that attendees gained practical skills and valuable insights to apply in their professional endeavors.

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Workshop on Python programming

The workshop on Python programming, held on the 28th and 29th of November 2022, was a collaborative effort between the Innovation and Entrepreneurship Development Cell (IEDC) and the Electronics and Communication Engineering (ECE) Department. Its primary objective was to equip participants with a comprehensive understanding of Python programming language, its applications, and practical implementation.

Session 1: Introduction to Python

Mr. Sharath Kumar K initiated the workshop with an introductory session on Python programming language. He covered the basic syntax, data types, and control structures in Python. Participants were given hands-on exercises to familiarize themselves with Python code writing and execution.

Session 2: Advanced Python Concepts

Ms. Fathima Zulfa delved into advanced concepts of Python programming. Topics included functions, modules, file handling, and exception handling. Participants engaged in coding exercises to reinforce their understanding of the concepts discussed.

Session 3: Python Applications and Projects

Ms. Fathimath Nahida explored various applications of Python in real-world scenarios. She highlighted Python's significance in web development, data analysis, artificial intelligence, and machine learning. The session concluded with a discussion on potential project ideas utilizing Python.

Key Takeaways:

Participants gained a fundamental understanding of Python programming language, including basic and advanced concepts. Practical exercises enabled participants to apply their learning in real-time scenarios, enhancing comprehension. Insight into Python's applications across diverse fields provided participants with a broader perspective on its relevance and significance.

Conclusion:

The workshop on Python programming organized by IEDC in association with the ECE Department proved to be an insightful and enriching experience for all participants. Through engaging sessions and hands-on activities, attendees acquired valuable skills and knowledge essential for leveraging Python in various domains. Such initiatives play a pivotal role in fostering technological proficiency and innovation among students.

LBS COLLEGE OF ENGINEERING KASARAGOD IEDC
ASSOCIATION OF ECE 2021-22
IN ASSOCIATION WITH
INNOVATION AND ENTREPRENEURSHIP DEVELOPMENT
CENTER LBS COLLEGE OF ENGINEERING KASARAGOD

2 DAY WORKSHOP ON
'PYTHON PROGRAMMING'
ON 28TH AND 29THNOVEMBER, 2022

CLASSES HANDLED BY
SHARATH KUMAR K (S7 IT)
FATHIMA ZULFA (S7 IT)
FATHIMATH NAHIDA (S7 IT)

Institutional Entrepreneurship Awareness Programme

The Institutional Entrepreneurship Development Cell (IEDC) at LBS College of Engineering, Kasaragod (LBSCEK) organized an Entrepreneurship Awareness Programme to foster entrepreneurial spirit among students and faculty. The programme aimed to enlighten participants about various facets of entrepreneurship, including ideation, startup ecosystem, funding, and success stories. Dr. Vinodu George, a distinguished Professor at LBS College of Engineering, Kasaragod (LBSCEK), shared insights into notable startups originating from the institution. The primary objective of the Entrepreneurship Awareness Programme was to instill entrepreneurial mindset and skills among participants.

Specific goals included:

- Educating participants about the entrepreneurial ecosystem.

- Inspiring participants through real-life success stories.

- Equipping participants with knowledge about ideation, business planning, and execution.

- Introducing participants to funding options and resources available for startups.

The Entrepreneurship Awareness Programme organized by IEDC, LBSCEK, proved to be a significant milestone in fostering entrepreneurial spirit within the college community. By imparting knowledge, motivation, and practical skills, the programme laid a solid foundation for nurturing future entrepreneurs. Going forward, sustained efforts and support are essential to harness the entrepreneurial potential and drive innovation and economic growth.

CHAPTER 3
CONCLUSION

Throughout the academic year 2022-23, we have orchestrated a series of successful events, marking a significant milestone for our organization. Among our proudest achievements is the impact we have made on incoming students. Guiding their dreams and aspirations towards the path of entrepreneurship has been our paramount accomplishment. Despite our successes, we acknowledge the presence of several flaws within our operations over the past year. However, we have diligently addressed these shortcomings, ensuring that future teams are well-informed and equipped to navigate similar challenges. As we pass the baton to the new team, we are excited to witness their endeavors to redefine the mission and vision of IEDC LBSCEK, just as we have done. Their ambitious goal is to foster the creation of even more innovative startups originating from LBSCEK, and we eagerly anticipate their progress.

CHAPTER 4
CONTACT

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