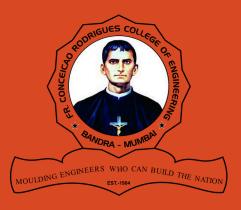
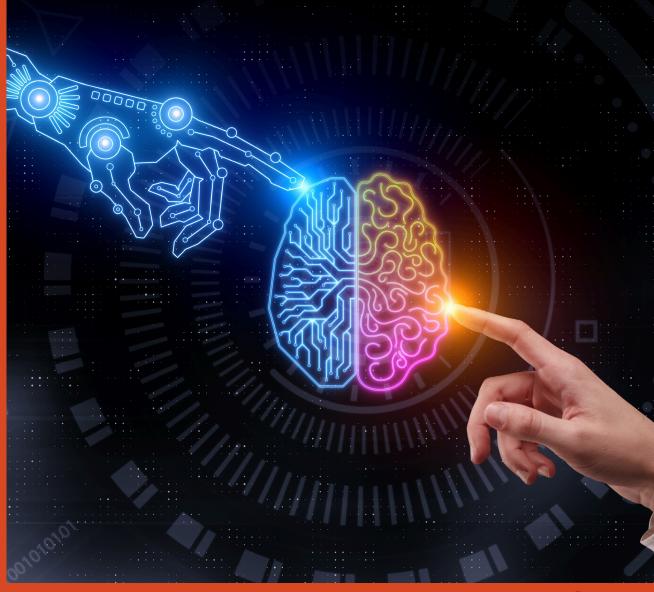
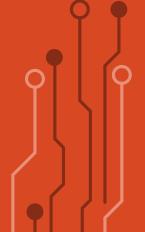
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DEPARTMENT OF ARTIFICIAL INTELLIGENCE & DATA SCIENCE ISSUE NO.06



#### VISION OF DEPARTMENT

"TO MOULD HIGH-QUALITY, INNOVATIVE, AND ETHICAL AI ENGINEERS TO BECOME PART OF THE GLOBAL WORKFORCE AND CONTRIBUTE TO THE BETTERMENT OF SOCIETY."

#### **Mission**

- Provide students with a skill-based education that will help them master problemsolving and analytical skills, as well as expand their domain expertise.
- Promote continuous learning and research in the core and emerging areas of Al and Data Science, as well as facilitate an excellent scholastic environment for students and faculty by developing centers of excellence in advanced technology.

#### **Program Educational Objective**

- Innovate, create, analyze, design, implement, and test AI-based solutions to solve real-world business problems.
- Adapt to changing AI-DS technology and use it in a multidisciplinary context.
- Develop and demonstrate leadership and interpersonal skills in their chosen field.

#### **Program Specific Outcomes**

The graduates of the BE in Artificial Intelligence & Data Science program will have a strong foundation and the ability to use cutting-edge AI tools and techniques to innovate and develop new solutions.



#### **EDITORIAL TEAM**

FACULTY IN-CHARGE - PROF. GARIMA TRIPATHI STUDENT IN-CHARGE - HARSH VISHWAKARMA

## **Table of Contents FOREWORD FROM HOD** 01 STRAIGHT FROM THE HEART 02 OF OUR ALUMNI HALL OF FAME 04 10 **CLASS PHOTOGRAPHS** 11 **DEPARTMENT EVENTS INTERNSHIPS** 16 **COURSES DONE BY STUDENTS** 21 **FACULTY CONTRIBUTION** 22 **EXTRA & CO - CURRICULAR** 29 **ACHIEVERS TECHNICAL ARTICLE** 34



#### FOREWORD FROM HOD

Dear all,

I am pleased to announce two exciting news, firstly college has got the autonomy for next 10 years and secondly, to prepare students for careers in the most high-demand industry of the twenty-first century, Fr.CRCE offers a BTech program in Computer Science and Engineering from the academic year 2024–2025 with an approved intake of 60 students per year.

Computer field's growth has been exponential. It never seemed to end creating new developments down the road. All is influencing our daily lives in ways we never could have imagined these days. Some jobs are being replaced by All and will continue to be replaced. However, I think that All is changing the nature of the work that professionals do. All and humans can work together to improve productivity. It is meant to supplement human intelligence, not to replace it, especially in their current generating and analytical powers.

Along with this, there is the requirement to satisfy global demand for highly qualified engineers. In 2024, certain skills will be more in demand than they were in the past, which could result in some extremely interesting opportunities. Students who want to grab this opportunity and grow, must keep up with the latest trends. Programming knowledge is required for those who want to create software, web applications, and websites. A wide range of Job roles demand data analysis skills. The need for security engineers is growing along with the importance of information security across sectors. Hence develop your cyber security skills. The globe is gradually shifting to renewable energy sources. Engineers need to be knowledgeable about technology related to renewable energy. Besides technical skills, soft skills like analytical thinking, empathy, patience, leadership, teamwork and interpersonal skills are also very important and improve one's employability

"A computer is like a violin. You can imagine making beautiful music, but you have to learn how to play it"

Bill Gates



# STRAIGHT FROM THE HEART OF OUR ALUMNI

Hello CRCE Family,

My name is Nachiket Nisal, and I graduated from the Information Technology department in the 2017-2021 batch at Fr. Conceicao Rodrigues College of Engineering (CRCE). Today, I'm excited to share with you the ups and downs of my college journey and some simple advice that might help you navigate your own.

#### The Big Move and Early Days

Moving from the calm of Aurangabad to the bustling city of Mumbai was a huge step for me. Initially, it felt like a storm of changes and challenges. My first year was especially tough, balancing the struggle of making new friends, adapting to the fast pace of Mumbai, and tackling difficult subjects like Mathematics 1 and 2, where I barely passed.

But what made a difference were our professors. Professors like Archana Karandikar and Hemant Khanolkar were more than educators; they were mentors who guided

and encouraged me through those tough times. Their support helped me find my footing in this new environment.

#### **Growing into the Role**

By my second year, I was more settled and ready to tackle academics with a bit more confidence. This was also when I joined the Rotaract Club. Joining this club turned out to be a pivotal decision in my college life. It wasn't just about the events; it was about growing skills that no classroom lecture could provide—like leading a team, managing large-scale events, and effective communication.

CRCE champions involvement in extracurricular activities, which I found extremely valuable. Whether it was helping organize college festivals, participating in robotics, or other activities, there was always a way to learn and grow. I discovered my real strength wasn't in coding, as I had initially thought, but in managing and leading people.

#### **Leadership and Unexpected Turns**

By the third year, I wasn't just participating but leading significant events like Mic Drop & The Heart Sole Run. The freedom and trust that our faculty bestowed upon us allowed me to thrive in leadership roles, teaching me lessons that I would carry for life. However, just as we were gearing up for our final year, the unexpected happened—the lockdown due to the pandemic. It cut our campus days short, leaving many plans and expectations unfulfilled. It was a stark reminder of how fleeting our college days were.

#### A Heartfelt Message to Current and Future Students

To all the CRCE students reading this, know that your time in college is unique and will fly by faster than you think. It's a rare period where you can experiment freely, succeed, stumble, and learn without harsh consequences.

If you're passionate about coding, dive deep into it. If robots fascinate you, create something new. If you find joy in organizing events, make them memorable. Use this time to explore every opportunity to learn and grow. College is your playground, and these moments won't come again.

Above all, engage deeply in your interests, learn as much as you can, and enjoy every bit of it. When you look back, ensure you do so with a smile, cherishing the memories and knowing you embraced every opportunity.

With warm regards, Nachiket Nisal

#### HALL OF FAME







Techpulse | Issue No. 06

#### **Aryan Kyatham**

- TIAA AI Retire-Hackathon winner (National Level)
- Aeravat SPIT Hackathon winner (National Level)
- GDSC BitnBuild winner (International Level)
- SunHacks winner (International Level)
- Google Cloud GenAl top 10 (APAC region)
- Crescendo, Prakalp winner, Buildspace S5
- Got into Build3 startup accelerator in Goa and secured 25 lakhs funding
- Al & DS branch Topper 2x

# Shravin Gavad, Neston & Myron Dabreo

- 1st Place at Bit n Build held at Fr.CRCE.
- 1st Place at Aeravat 1.0 held at Sardar Patel Institute of Technology.

#### Sahil Khan, Pritesh Kunder & Rishabh Pathak

- 2nd Place at Syntechxathon held at R.D National College
- 2nd Place at Hackmania held at Atharva College of Engineering.

#### HALL OF FAME













#### **Denslin Nunes**

 Won Prize at Moisture minds held at IIT Dharwad.

#### Mirza Mohammed Junaid

• Won Prize at TIAA Hackathon.

#### **Andre Isaac Nazareth**

 Best Paper Award at 3rd International Conference on Advanced Computing Technologies and Applications held at DJ Sanghvi College of Engineering

#### **Trisha**

 Best Paper Award at 3rd International Conference on Advanced Computing Technologies and Applications held at DJ Sanghvi College of Engineering

#### **Dr. Jagruti Save**

 Best Paper Award at 3rd International Conference on Advanced Computing Technologies and Applications held at DJ Sanghvi College of Engineering

#### **Mohit Pansare**

 Best Paper Award at 7th International Conference on Ideas, Innovations and Impact in Science and Technology

#### Pratham Mahajan

 Best Paper Award at 7th International Conference on Ideas, Innovations and Impact in Science and Technology

#### **HALL OF FAME**



#### Swapnali Makdey

 Best Paper Award at 7th International Conference on Ideas, Innovations and Impact in Science and Technology

#### Sakshi

 Best Paper Award at 7th International Conference on Ideas, Innovations and Impact in Science and Technology

# **ACM EVENTS**

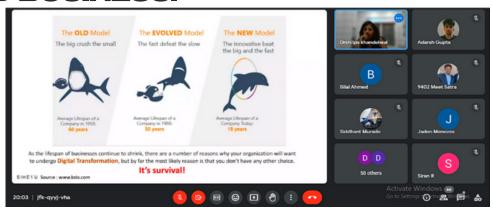
#### LEAN STARTUP



#### CONVERTING INNOVATION INTO STARTUP



# • DIGITAL TRANSFORMATION IN STARTUPS AND BUSINESS.



# **ACM EVENTS**

GENERATIVE AI AND ENTREPRENEURSHIP.



SHARK TANK



• ENTREPRENEURSHIP SKILLS, ATTRIBUTE AND BEHAVIOUR.



## **ACM EVENTS**

#### SEMICODE HACKATHON



#### HOW TO PLAN FOR STARTUP WITH LEGAL & ETHICAL STEPS



#### INNOVATEX 2024



### **CLASS PHOTOGRAPHS**







#### FINALYEAR FAREWELL

The final year farewell event held on 23rd April 2024, was a memorable occasion to honor and bid adieu to the graduating class of 2024. Organized by Al&DS department, the event celebrated the achievements and journeys of the students over the years.

**Objectives:** 

- Celebrate Achievements: Recognize and celebrate the academic and extracurricular accomplishments of the graduating class.
- **Express Gratitude:** Provide a platform for students to express their gratitude towards faculty, staff, and peers.
- Foster Camaraderie: Strengthen the bonds among students and between students and faculty.
- Encourage Reflection: Allow students to reflect on their journey and share memorable experiences.

The farewell event was structured into several segments. The event commenced with a warm welcome from Mrs. Garima Tripathi. Dr. Jagruti Save, Head of the AI&DS department, delivered an opening address, congratulating the students on their achievements and wishing them success in their future endeavors.

Students delivered heartfelt speeches, sharing their experiences, challenges, and triumphs during their time at college. Faculty members shared their reflections, offered words of wisdom, and expressed their pride in the graduating class.

The session concluded with refreshments and a photo session with students and faculty.



#### **SWACHHATA PAKHWADA 2024**

The cleanliness drive held at Fr. Conceicao Rodrigues College of Engineering from 16th to 29th February 2024 was a remarkable initiative aimed at promoting environmental awareness, community engagement, and a cleaner campus. Organized by Mrs. Garima Tripathi, Assistant Professor, the event saw enthusiastic participation from students, faculty, and staff members.

#### **Objectives**

- Promote Cleanliness: Encourage the college community to maintain a clean and hygienic environment.
- **Environmental Awareness:** Raise awareness about the importance of cleanliness and waste management.
- Community Engagement: Foster a sense of responsibility and teamwork among participants.
- Sustainable Practices: Introduce and implement sustainable waste management practices within the campus.



# **AUTONOMY ORIENTATION SESSION WITH PARENTS**

The orientation session was designed to brief parents of second and third-year students about the concept of autonomy at Fr. Conceicao Rodrigues College of Engineering. This session aimed to provide a comprehensive understanding of how autonomy impacts academic policies, curriculum design, and the overall student experience.

#### **Objectives:**

- Educate Parents: Inform parents about the concept and benefits of autonomy in higher education.
- Clarify Policies: Explain the specific policies and practices under the autonomous status of the college.
- **Engage Parents:** Address parents' concerns and questions regarding autonomy and its implications on their children's education.
- **Highlight Advantages:** Emphasize the advantages of autonomy in fostering academic excellence and innovation.

The session began with a warm welcome by Dr. Jagruti Save, who introduced the agenda of the session. A detailed presentation followed, explaining the concept of autonomy, its significance in higher education, and how it differs from affiliated institutions.

#### **Key Points Discussed:**

- Curriculum Flexibility: Information on the flexible and innovative curriculum design allowed by autonomy, including the introduction of new courses and interdisciplinary programs.
- **Assessment and Evaluation:** Explanation of the autonomous evaluation system, including internal assessments, continuous evaluation, and end-semester exams.
- **Credit System:** Details on the credit-based system and its advantages for students in terms of learning pace and course selection.
- Academic Freedom: Insights into the freedom faculty members have in designing and updating course contents.

The session concluded with a summary of the key points discussed. Parents were then invited to join for refreshments, providing an opportunity for informal interactions with faculty members and staff.



#### PARENT TEACHER MEETING

#### **Objective of the Session:**

- To make parents aware of the department vision and recent developments in the department.
- To discuss and exchange ideas on the holistic development of the students.
- To orient students towards the autonomy status, examination, and academic rules.

Parent-Teacher Meeting for the second-year students was conducted on 20th April 2024. The meeting started with the welcome of parents by the Head of the Department, Dr. Jagruti Save, who then introduced the subject teachers of the class.

Dr. Save shared the vision and mission of the department and talked about the infrastructure of the department. Parents were briefed about the various activities of the department, including the training and placement opportunities provided to the students on campus. The course structure and the Honor and Minor subjects of the department were also discussed.

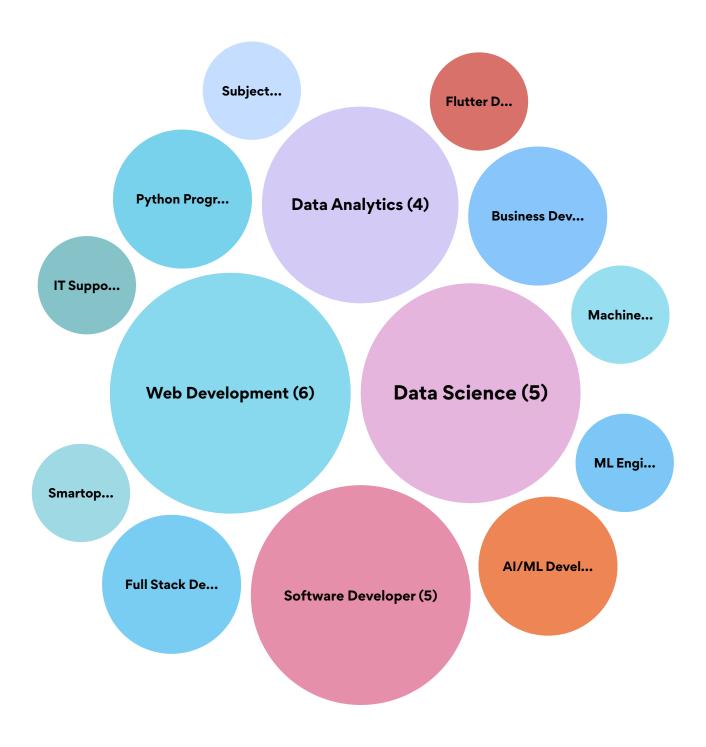
Parents were informed about the college's autonomy status, and the academic and examination rules were presented to them. The academic calendar for the year 2024-25 was presented to the students. Additionally, the introduction of internships for the final year was discussed.



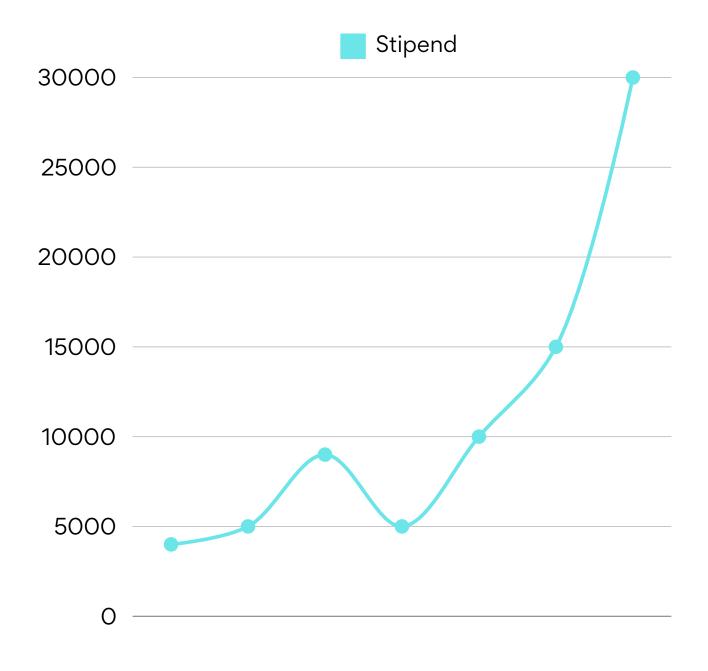
Name	Position	Company
Johnson Kaligithi	IT Support Intern	Standard Information Services Pvt. Ltd.
Arnav Pandita	Smartops development	Amdocs Development Centre India LLP
Nicole Mascarenhas	Machine Learning	Cloud Counselage Pvt. Ltd.
Punit Gavali	Web Development	Codeclause Pvt. Ltd.
Myron Correia	Python Programming	InternPe
Sharvin Gavad	Python and Django	Altissadvance Tech Pvt. Ltd.
Bright Carvalho	ML Engineer	The Tann Mann Foundation
Bright Carvalho	Business Development Executive	Procode IT Services
Divyal Patil	Subject Matter Experrt	LearnAsYouGo
Yash Singh	Data Analytics	Colgate Global Business Services Pvt. Ltd.
Omkar Anabathula	Full Stack Developer	CausalFunnel Global Inc.

Name	Position	Company
Gladys Skariah	Data Science	Exposys Data Labs
Yash Gurav	Full Stack Developer	K3Y Technology Services Pvt. Ltd.
Sanvi Pokle	Web Developer	Affinzy Advertising Pvt. Ltd.
Moeez Shaikh	Web Developer	Affinzy Advertising Pvt. Ltd.
Junaid Mirza	Software Developer	TIAA Business Services Pvt. Ltd.
Nayonica Sherlin	Flutter Development	HoneyBadgersCo
Aakash Lopes	Business Development	IRIS Tech Developers
Lyneshia Correa	AI/ML Developer	Kyoorius Communications Pvt. Ltd.
Shriansh Jena	Data Science and Businsess Analytics	Sparks Foundation
Shriansh Jena	Data Science	Oasis Infobyte
Shriansh Jena 17	Data Science	Bharat Intern  Techpulse I Issue No. 06

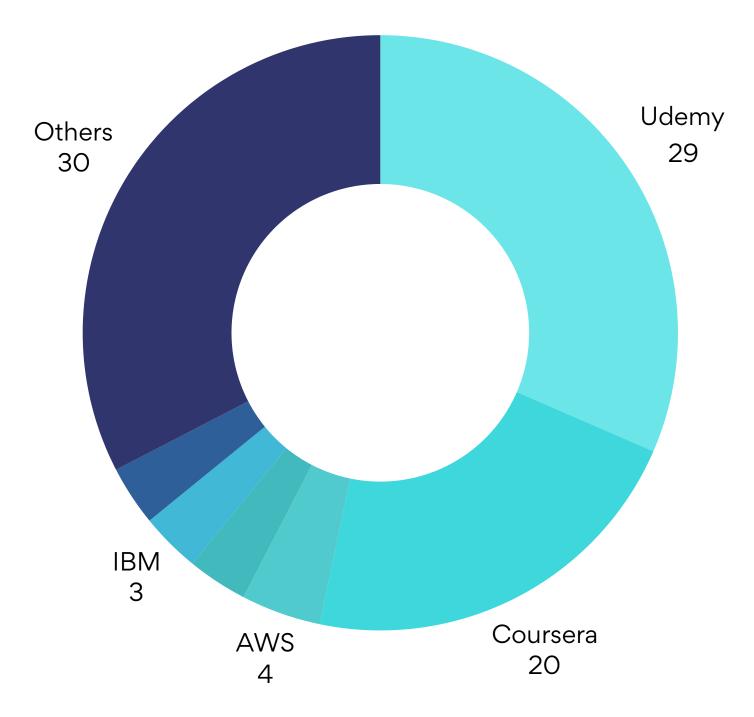
Name	Position	Company
Meet Satra	Data Analytics	Affinzy Advertising Pvt. Ltd.
Bhavika Salvi	Data Analytics	LTIMindTree LTd.
Lloyd Jose	Al	Codeclause Pvt. Ltd.
Lloyd Jose	Web Development	CodeAlpha
Lloyd Jose	Web Development and Designinig	Oasis Infobyte
Wellborn Bar	Software Developer	Arcon Tech Solutions Pvt. Ltd.
Liviya Fernandes	Data Science	X Billion Skills Lab Pvt. Ltd.
Andre Nazareth	Data Analysis and ML	XIRCLS



The Department of Artificial Intelligence & Data Science is dedicated to enhancing students' practical skills and encourages them to pursue internships. These experiences provide firsthand exposure to industry practices and help prepare students for successful careers in the field.



# ONLINE COURSES (DONE BY STUDENTS)



# **FACULTY CONTRIBUTION**

#### **FDP PROGRAMS ATTENDED**

Name	Туре	Title	Organized by
Dr. Jagruti Save	FDP	ATAL FDP on Information Security Management: A Practical Approach	ST. FRANCIS INSTITUTE OF TECHNOLOGY (ENGG. COLLEGE)
Mrs.Garima Tripathi	FDP	Building a transparent and explainable Al	FrCRCE(AI&DS dept)
Mrs.Garima Tripathi	FDP	Faculty Patent Development Program	FrCRCE(Research and IPR cell)
Mrs.Aditi Malkar	FDP	Building a transparent and explainable Al	SFIT, Borivali
Mrs.Aditi Malkar	FDP	Information Security Management: A Practical Approach	SFIT, Borivali
Mrs.Prachi Dalvi	FDP	AICTE Training and Learning (ATAL) Academy- Generative AI	SPIT, Andheri

# **FACULTY CONTRIBUTION**

#### FDP PROGRAMS ATTENDED

Name	Туре	Title	Organized by
Prof. Swati Ringe	FDP	Faculty Patent Development Program	FrCRCE(Research and IPR cell)
Prof. Swati Ringe	FDP	ATAL FDP on Blockchain Technology- architecture and its applications	Fr. C.R.C.E. Bandra
Prof. Swati Ringe	FDP	Building a transparent and explainable Al	Fr. C.R.C.E. Bandra
Prof. Swati Ringe	FDP	FDP on Big Data Analytics-basics to advanced	Fr. C.R.C.E. Bandra
Prof. Sarika Davare	FDP	ATAL FDP on Blockchain Technology- architecture and its applications	Fr. C.R.C.E. Bandra
Prof. Sarika Davare	FDP	Module 4 Instructional Planning and Delivery	AICTE, NITTR

# **FACULTY CONTRIBUTION**

#### **FDP PROGRAMS ATTENDED**

Name	Туре	Title	Organized by
Prof. Sarika Davare	FDP	Module 6 Student Assessment and Evaluation	AICTE, NITTR
Prof. Sarika Davare	FDP	Module 7 Creative Problem Solving , Innovation and Meaningful R & D	AICTE, NITTR
Prof. Sarika Davare	FDP	Module 8 Institutional Management & Administrative Procedures	AICTE, NITTR

# TECHNICAL PUBLICATIONS

Author	Paper Title	Journal/ Conference
Denslin Nunes		Fourteenth International conference on computing, communication and networking technologies (ICCCNT) July 2023
Wellborn Bar		
Sonya Fernandes	Al driven Traffic lights	
Meet Satra	Ardiiveir frame lights	
Jagruti Save		
Prachi Dalvi		
Andre Nazareth		Third internatinal
Grace Pereira	Effect of hyper parameters tuning on transfer learning models for brain tumor	conference ion advanced computing technologies
Trisha Nagarkatte	detection and classiification	and applications- 2023(ICACTA) October 2023
Jagruti Save		OCIODEI 2023

# TECHNICAL PUBLICATIONS

Author	Paper Title	Journal/ Conference	
Mohit Pansare		IJISRT (International Journal of Innovative Science and Research Technology) July 2023	
Gladys Gince	Development of a tool for		
Rhea Bhalekar	quick result analysis		
Garima Tripathi			
Pratham Kambli		POSITIF July 2023	
Gladys Gince Skariah	Laptop Price Prediction using Machine Learning		
Swati Ringe			
Ketaki Sarode		International Conference on Integration of Computational Intelligent	
Aryan Thakur	Food Recognition System		
Lyneshia Correa	1 Journal of the control of the cont	Systems Nov 2023	
Sarika Davare			

# TECHNICAL PUBLICATIONS

Author	Paper Title	Journal/ Conference	
Sarika Davare	Lung Cancer Prediction	Journal Of Advanced Applied Scientific Research (JOAASR)	
Dr. Vishal Shirsath	based on Lifestyle Data using Machine Learning		
Dr. Farook Sayyad	Techniques	In Process	
Sarika Davare	An Improved Model for	International Conference	
Dr. Vishal Shirsath	lung cancer prediction based on lifestyle parameters using Machine	on Integration of Computational Intelligent Systems	
Dr. Farook Sayyad	Learning Techniques	Nov 2023	
Joshua D'sylva		Sixth International Conference on Recent Trends in Engineering, Management Pharmacy and Science - SAGECON2K24, AND	
Riona Gonsalves	An Assessment of Artificial		
Swaranjali Bodhi	Intelligence and Machine Learning Applications in		
Prachi Dalvi	Remote Sensing for Crop Classification	SERB GRANTED SYMPOSIUM, ORGANIZING BY SIRT BHOPAL 29 FEB – 1 MARCH. 2024	
Prachi Dalvi	A Comprehensive Review	IEEE National Students'	
	of Plant Recognition Approaches: Techniques, Challenges, and Future Direction	Conference on Innovations in Rural Development - 2023 2023-07-03	

# **PATENTS**

Author	Title	Publication Date
Prof. Swati Ringe	AUTISCAPE - AN IMMERSIVE 3D ENVIRONMENT WITH MULTI-LEVELFADING, ANIMATIONS, TEXT-TO- SPEECH CONVERSION USING BARK -AN AI BASED MODEL FOR USE IN COMPUTATIONAL THERAPY FORAUTISM SPECTRUM DISORDER	22/12/2023
Prof. Swati Ringe	YOGAGURU : YOUR AI YOGA TRAINER	15/12/2023
Prof. Swati Ringe	Blockchain-based Healthcare Management Application	26/01/2024
Aiden Gigi Samuel		
Sia Viji Puthusseri	Detection of malicious blockchain attacks using federated learnings	13/10/2023
Edryn Shajan Eazhakadan		

#### **BE AI&DS**

Name	Competition	Date	Position
Andre Isaac Nazareth	3rd International Conference on Advanced Computing Technologies and Applications	10/6/2023	Best In Track: Related Areas and Application
Edryn Shajan Eazhakadan	<ul><li>SIH internal hackathon</li><li>Athlead Intra rink football</li></ul>	<ul><li>9/16/2023</li><li>10/22/2023</li></ul>	<ul><li>Top 15</li><li>2nd</li></ul>
Jonathan Joseph	Formula imperial	10/12/2023	AIR 4th
Liviya Fernandes	Throwball	-	1st runner up
Moeez Shaikh	Rink Football Boys	10/22/2023	2nd
Rachana Chavan	Throwball	-	1st runner up
Vinit Dave	Boys Rink Football	10/22/2023	2nd

#### **TE AI&DS**

#### 1. ARYAN KHATHAM

- 1ST PLACE IN BIT N BUILD'24 HACKATHON.
- 1ST PLACE IN HACKATHON CRESCENDO 2024.
- 1ST PLACE IN AERAVAT 1.0.
- 1ST PLACE IN SUNHACKS-2K24.

#### 2. ASHVINI CHAUHAN

- 1ST PLACE IN BIT N BUILD'24 HACKATHON.

#### 3. NICOLE MASCARENHAS

- 1ST PLACE IN ATHLEAD CHESS 2023.
- 2ND PLACE IN HR ON-BOARDING ROLEPLAY COMPETITION.

#### 4. NESTON CABRAL

- 1ST PLACE IN AERAVAT 1.0.
- 1ST PLACE IN BIT N BUILD'24 HACKATHON.

#### **5. SAHIL KHAN**

- 1ST RUNNER-UP IN IEEE TECHITHON'23 HACK MANIA 24-HOUR OFFLINE HACKATHON.
- 2ND PLACE IN BINARY BEATS.

#### 6. SHARVIN GAVAD

- 3RD PLACE IN PRAKALP 2.0.
- 1ST PLACE IN BIT N BUILD'24 HACKATHON.
- 1ST PLACE IN AERAVAT 1.0.
- 1ST PLACE IN SUNHACKS-2K24.

#### 7. PRITESH KUNDER

- 2ND PLACE IN BINARY BEATS.

#### **8. ABHIJEET BASANT**

- 1ST PLACE IN WORLD INNOVATION DAY.

#### **TE AI&DS**

- 9. CHAVARATTIL SHIVPRASAD
- 1ST PLACE IN WORLD INNOVATION DAY.
- **10. VAISHNAVI PRATAP**
- 1ST PLACE IN ALGOHOLIC 1.0.
- 11. AARON DABREO
- 1ST PLACE IN BIT N BUILD'24 HACKATHON.
- 1ST PLACE IN AERAVAT 1.0.

#### **SE AI&DS**

#### 1. AISHWARYA SREEJITH

- WON 1ST PRIZE IN FRCRCE INTRA COLLEGE CARROM.
- WON 1ST PLACE IN GIRLS SINGLES AND DOUBLES TT IN ATHLOS TABLE TENNIS.

#### 2. SWARANJALI BODHI

- WON 1ST POSITION IN ELOCUTION.

#### 3. IBRAIZ DIWAN

- WON RUNNER-UP POSITION IN ATHLOS.

#### 4. SARAH GER

- WON 1ST PRIZE IN EUPHORIA DANCE COMPETITION.
- WON 2ND PRIZE IN MASTERCHEF.
- WON 3RD PRIZE IN 400 METERS.
- WON 1ST PRIZE IN MOSAIC FASHION SHOW.

#### 5. CYRIL GIRI

- WON 3RD POSITION IN IOT TRAUMA.
- WON 1ST PRIZE IN DARE TO RACE.
- WON IN SMART INDIA HACKATHON.

#### 6. RIONA

- WON 2ND POSITION IN SPORTS DAY.

#### 7. DARSHAN KISHOR JAIN

- WON 1ST PRIZE IN EUPHORIA DUO.

#### 8. BRYSON LOPES

- WON 1ST AND 3RD PRIZE IN 100 METER RUN RELAY.

#### 9. JOSTAN MATHIAS

- WON 1ST POSITION IN 800 METER RUN.
- WON IN ATHLOS GROUND FOOTBALL.

#### **SE AI&DS**

#### **10. ACELIN NAZARETH**

- WON 1ST AND 3RD PRIZE IN ARGALI'S SPORTS DAY.

#### 11. ANUSHKA PATIL

- WON 2ND POSITION IN NSS MASTERCHEF.

#### 12. CHRIS PEREIRA

- WON 1ST PRIZE IN TABLE TENNIS.

#### 13. MITESH SAWANT

- WON 1ST POSITION IN RELAY.

#### 14. SAMARTH SHETTY

- WON 3RD POSITION IN TUG OF WAR.
- WON 1ST POSITION IN RELAY.

#### 15. ADITI SINGH

- WON 1ST PRIZE IN MASTERCHEF NSS CRCE.
- WON IN TECH-A-THON 3.0.

#### **16. MAX VARGHESE**

- WON 2ND POSITION IN ATHLOS.

#### 17. ZEBIN ANIL

- WON 3RD PRIZE IN TRIVIA CONTEST EUPHORIA.
- WON IN BAND COMPETITION.

#### **18. HARSH KENI**

- WON 1ST PRIZE IN DARE TO RACE.

#### 19. SMITESH SACHIN PARVATKAR

- WON 1ST POSITION IN FOOTBALL.

## TECHNICAL ARTICLE

# FROM SCI-FI TO REALITY: HOW AI IS BUILDING THE METAVERSE

#### -JANET NELSON (TE AI&DS)

THE CONCEPT OF THE METAVERSE, A COLLECTIVE VIRTUAL SHARED SPACE, WAS ONCE A FIXTURE OF SCIENCE FICTION, DEPICTED IN MOVIES, BOOKS, AND GAMES AS AN ULTIMATE FUSION OF PHYSICAL AND VIRTUAL REALITIES. TODAY, HOWEVER, THIS VISION IS SWIFTLY BECOMING A REALITY, LARGELY DUE TO THE TRANSFORMATIVE POWER OF ARTIFICIAL INTELLIGENCE (AI). THIS DIGITAL UNIVERSE, WHERE USERS CAN INTERACT, WORK, AND PLAY IN IMMERSIVE 3D ENVIRONMENTS, RELIES HEAVILY ON AI TECHNOLOGIES TO CREATE, MANAGE, AND ENHANCE ITS MYRIAD FACETS. AI'S ABILITY TO PROCESS VAST AMOUNTS OF DATA, LEARN FROM IT, AND MAKE INTELLIGENT DECISIONS IS AT THE HEART OF BRINGING THE METAVERSE TO LIFE.

AI'S CONTRIBUTIONS TO THE METAVERSE BEGIN WITH THE CREATION OF VIRTUAL ENVIRONMENTS. TRADITIONALLY, BUILDING DETAILED AND IMMERSIVE 3D WORLDS REQUIRED SIGNIFICANT MANUAL EFFORT AND TIME. HOWEVER, AI-DRIVEN ALGORITHMS, SUCH AS THOSE USING PROCEDURAL GENERATION TECHNIQUES, CAN NOW GENERATE THESE ENVIRONMENTS MORE EFFICIENTLY AND REALISTICALLY. PROCEDURAL GENERATION USES PREDEFINED RULES AND PATTERNS TO CREATE COMPLEX LANDSCAPES, ARCHITECTURE, AND ECOSYSTEMS, ENSURING THAT EACH ELEMENT IS UNIQUE AND COHESIVE. THIS NOT ONLY SAVES TIME BUT ALSO ENABLES THE CREATION OF VAST, INTRICATE WORLDS THAT WOULD BE IMPRACTICAL TO CONSTRUCT MANUALLY. IMAGINE WALKING THROUGH A BUSTLING VIRTUAL CITY OR EXPLORING AN ALIEN PLANET—ALL METICULOUSLY CRAFTED BY AI IN A FRACTION OF THE TIME IT WOULD TAKE HUMAN DESIGNERS.

FURTHERMORE, AI-POWERED TOOLS LIKE DEEP LEARNING AND NEURAL NETWORKS ARE INSTRUMENTAL IN DESIGNING LIFE-LIKE AVATARS AND CHARACTERS. THESE TOOLS VAST **AMOUNTS** OF **REAL-WORLD** TO **CREATE** DATA REPRESENTATIONS THAT CLOSELY MIMIC HUMAN APPEARANCE AND BEHAVIOR. THIS LEVEL OF REALISM IS CRUCIAL FOR USER IMMERSION, AS IT MAKES INTERACTIONS WITHIN THE METAVERSE FEEL AUTHENTIC AND ENGAGING. FOR EXAMPLE, AI CAN ANIMATE AVATARS TO EXHIBIT REALISTIC FACIAL EXPRESSIONS AND BODY LANGUAGE, ENHANCING SOCIAL INTERACTIONS AND MAKING VIRTUAL MEETINGS GATHERINGS MORE NATURAL. PICTURE A VIRTUAL CONFERENCE WHERE ATTENDEES' AVATARS REACT AND INTERACT JUST AS THEY WOULD IN THE REAL WORLD, COMPLETE WITH SUBTLE FACIAL CUES AND GESTURES.

ONE OF THE MOST EXCITING ASPECTS OF THE METAVERSE IS THE POTENTIAL FOR NATURAL, INTUITIVE USER INTERACTIONS. AI PLAYS A PIVOTAL ROLE HERE BY ENABLING SOPHISTICATED NATURAL LANGUAGE PROCESSING (NLP) AND VOICE RECOGNITION TECHNOLOGIES. THESE ADVANCEMENTS ALLOW USERS TO COMMUNICATE WITH EACH OTHER AND WITH AI-DRIVEN CHARACTERS IN A MORE NATURAL MANNER, USING SPEECH RATHER THAN TEXT INPUTS. THIS SEAMLESS COMMUNICATION ENHANCES THE OVERALL USER EXPERIENCE, MAKING THE METAVERSE MORE ACCESSIBLE AND ENGAGING FOR A WIDER AUDIENCE. IMAGINE HAVING A CONVERSATION WITH AN AI CHARACTER THAT UNDERSTANDS CONTEXT, EMOTIONS, AND RESPONDS JUST LIKE A HUMAN.

MOREOVER, AI-DRIVEN RECOMMENDATION SYSTEMS CAN PERSONALIZE USER EXPERIENCES WITHIN THE METAVERSE. BY ANALYZING USER BEHAVIOR, PREFERENCES, AND INTERACTIONS, AI CAN SUGGEST ACTIVITIES, ENVIRONMENTS, AND SOCIAL CONNECTIONS TAILORED TO INDIVIDUAL USERS. THIS LEVEL OF PERSONALIZATION ENSURES THAT EACH USER'S JOURNEY THROUGH THE METAVERSE IS UNIQUE, KEEPING THEM ENGAGED AND INVESTED IN THE VIRTUAL WORLD. FOR INSTANCE, AN AI COULD RECOMMEND A VIRTUAL ART GALLERY TO A USER WHO HAS SHOWN INTEREST IN DIGITAL ART OR SUGGEST NEW FRIENDS BASED ON SHARED INTERESTS AND ACTIVITIES. IT'S LIKE HAVING A PERSONAL GUIDE THAT KNOWS EXACTLY WHAT YOU'LL LIKE NEXT. THE METAVERSE IS NOT LIMITED TO VIRTUAL REALITY (VR); IT ALSO ENCOMPASSES AUGMENTED REALITY (AR), WHERE DIGITAL ELEMENTS ARE SUPERIMPOSED ONTO THE PHYSICAL WORLD. AI IS CRITICAL IN ENABLING AR EXPERIENCES BY PROCESSING AND INTERPRETING DATA FROM THE REAL WORLD TO INTEGRATE DIGITAL CONTENT SEAMLESSLY. COMPUTER VISION, A SUBSET OF AI, ALLOWS AR SYSTEMS TO RECOGNIZE AND TRACK PHYSICAL OBJECTS, MAKING INTERACTIONS BETWEEN THE REAL AND DIGITAL WORLDS FLUID AND INTUITIVE. FOR EXAMPLE, AI-DRIVEN AR APPLICATIONS CAN ENHANCE RETAIL EXPERIENCES BY ALLOWING CUSTOMERS TO VISUALIZE PRODUCTS IN THEIR OWN HOMES BEFORE MAKING A PURCHASE, OR IN EDUCATION, WHERE AR CAN BRING HISTORICAL EVENTS OR COMPLEX SCIENTIFIC CONCEPTS TO LIFE, PROVIDING INTERACTIVE AND IMMERSIVE LEARNING EXPERIENCES. IMAGINE A HISTORY LESSON WHERE ANCIENT CIVILIZATIONS COME TO LIFE RIGHT IN YOUR LIVING ROOM.

WHILE THE POTENTIAL OF THE METAVERSE IS VAST, SEVERAL CHALLENGES MUST BE ADDRESSED TO MAKE IT A PRACTICAL REALITY. ONE MAJOR CONCERN IS THE COMPUTATIONAL POWER REQUIRED TO CREATE AND SUSTAIN SUCH AN EXPANSIVE DIGITAL UNIVERSE. AI HELPS TO MITIGATE THIS ISSUE BY OPTIMIZING RESOURCE MANAGEMENT AND ENSURING EFFICIENT DATA PROCESSING. AI ALGORITHMS CAN PREDICT AND ALLOCATE COMPUTATIONAL RESOURCES DYNAMICALLY, ENSURING A SMOOTH AND UNINTERRUPTED USER EXPERIENCE.

AS AI CONTINUES TO EVOLVE, ITS ROLE IN BUILDING AND ENHANCING THE METAVERSE WILL ONLY BECOME MORE SIGNIFICANT. FUTURE ADVANCEMENTS IN AI COULD LEAD TO EVEN MORE IMMERSIVE AND REALISTIC VIRTUAL EXPERIENCES, FURTHER BLURRING THE LINES BETWEEN REALITY AND THE DIGITAL WORLD. INNOVATIONS SUCH AS BRAIN-COMPUTER INTERFACES (BCIS) COULD ENABLE DIRECT INTERACTION WITH THE METAVERSE THROUGH THOUGHT ALONE, REVOLUTIONIZING HOW WE PERCEIVE AND INTERACT WITH DIGITAL SPACES. AI'S ABILITY TO LEARN AND ADAPT WILL ENSURE THAT THE METAVERSE CONTINUOUSLY EVOLVES, OFFERING NEW POSSIBILITIES AND EXPERIENCES FOR USERS. ENVISION A FUTURE WHERE YOU CAN NAVIGATE A DIGITAL UNIVERSE JUST BY THINKING ABOUT IT.

IN CONCLUSION, AI IS THE DRIVING FORCE TURNING THE METAVERSE FROM A SCI-FI DREAM INTO A TANGIBLE REALITY. BY ENABLING THE CREATION OF IMMERSIVE ENVIRONMENTS, ENHANCING USER INTERACTIONS, AND INTEGRATING AR EXPERIENCES, AI IS LAYING THE FOUNDATION FOR A DIGITAL UNIVERSE THAT PROMISES TO TRANSFORM OUR LIVES. AS WE CONTINUE TO EXPLORE THE POSSIBILITIES OF THE METAVERSE, AI WILL UNDOUBTEDLY REMAIN AT THE FOREFRONT, SHAPING THE FUTURE OF THIS EXCITING NEW FRONTIER. THE METAVERSE IS NOT JUST A DIGITAL ESCAPE—IT'S THE NEXT EVOLUTION OF OUR INTERCONNECTED WORLD, WITH AI AS THE MASTER ARCHITECT.

#### **GOAL**

Take up one idea.

Make that one idea your life.

Think of it, dream of it.

Live on that idea.

Let the brain, muscles, nerves, every part of your body Be full of that idea and just leave every other idea alone.

This is the way to "SUCCESS".

And this is the way great spiritual giants are produced.

Others are mere talking machines.

-Swami Vivekananda

## **TECHPULSE**

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