SciTech Chronicles

WOXSEN UNIVERSITY

SCHOOL OF TECHNOLOGY & SCIENCES

NEWSLETTER AUGUST- 2025

Message

"REMEMBER, LEADERSHIP IS NOT JUST ABOUT ACHIEVING GOALS; IT'S ABOUT INSPIRING OTHERS TO ACHIEVE THEM TOGETHER. BY BLENDING THE WISDOM OF THE PAST WITH THE REALITIES OF THE PRESENT, LEADERS CAN NAVIGATE THE COMPLEXITIES OF THE MODERN WORLD AND CREATE LASTING IMPACT."

-Dr. Raul V. Rodriguez
Vice-President
Woxsen University

"I BELIEVE THAT EDUCATION IS NOT MERELY THE ACQUISITION OF KNOWLEDGE, BUT THE CULTIVATION OF WISDOM. WE WILL STRIVE TO CREATE A HOLISTIC LEARNING EXPERIENCE THAT FOSTERS INTELLECTUAL CURIOSITY, ETHICAL CONSCIOUSNESS, AND CULTURAL SENSITIVITY. BY PROVIDING OPPORTUNITIES FOR EXPERIENTIAL LEARNING, MENTORSHIP, AND COMMUNITY ENGAGEMENT, WE WILL EQUIP OUR STUDENTS WITH THE SKILLS AND VALUES NEEDED TO SUCCEED IN AN EVER-EVOLVING WORLD."

-Dr. Uma Ananda
Vice Chancellor
Woxsen University

Message

"IN MY SCHOOL OF TECHNOLOGY IT IS NOT JUST ABOUT THE CUTTING-EDGE LABS WITH THE LATEST GPUS AND SYSTEMS BUT THE ENVIRONMENT AND THE MENTORS AMONG THE FACULTY."

-Dr. Peplluis Esteva de la Rosa
Executive Dean
School of Technology

"AS DEAN OF THE SCHOOL OF SCIENCES, I'M PROUD OF OUR STUDENTS AND FACULTY FOR THEIR HARD WORK. OUR LABS ARE HELPING DRIVE EXCITING RESEARCH AND HANDS-ON LEARNING. I LOOK FORWARD TO THE CONTINUED SUCCESS OF OUR COMMUNITY."

-Dr. Daya Shankar
Dean
School of Sciences

Table of Contents

SCIENCE AND TECHNOLOGY NEWS

Bridging Academia and Industry: A Transformative Session with IBM at Woxsen University

As part of Woxsen University's ongoing Corporate Alignment initiative, students from the School of Technology had the exceptional opportunity to engage in an enlightening session conducted by representatives from IBM, a global leader in technology and innovation. The session was nothing short of inspiring, offering students a rare chance to interact directly with experts who are actively shaping the technological future of the world.

The visit by the IBM team was a significant milestone in the university's mission to provide students with exposure that extends beyond classroom learning. It marked a valuable step in aligning academic knowledge with real-world industry practices. The interactive session was rich with insights on evolving technology trends, current industry demands, and the kind of agile mindset that companies like IBM look for in young professionals.

The speakers, all seasoned professionals from IBM, brought a wealth of knowledge and authenticity to the room. They delved into subjects ranging from cloud computing, AI integration, and quantum advancements, to the emerging role of cybersecurity, data ethics, and sustainable tech solutions. What made the session especially impactful was not just the content, but the way the speakers translated complex ideas into real-world narratives and case studies. Through their stories, students gained a clearer understanding of how technological innovation unfolds within the high-pressure environment of global corporations.

A key highlight of the session was the discussion around the future of work and the evolving expectations of the tech industry. The IBM team emphasized the need for adaptability, continuous learning, and collaboration in today's dynamic workspaces. Students were encouraged to go beyond conventional learning, explore interdisciplinary domains, and most importantly—stay curious. They also touched upon the increasing importance of soft skills, ethical reasoning, and global awareness in tech roles, reinforcing that innovation is not just about code and computation, but also about purpose and people.

For many students, the session served as a moment of reflection—on their own journeys as learners and their potential impact as future technologists. Listening to professionals who once stood where they stand today, but now lead transformative global projects, brought a renewed sense of motivation. It was a reminder that their goals are attainable, provided they remain inquisitive, open-minded, and persistent.

The event was made possible by the dedicated efforts of the School of Technology, whose commitment to student development continues to create meaningful opportunities for learning and growth. Their initiative in bringing reputed corporate leaders to campus not only enriches the curriculum but also prepares students for the challenges and expectations of the professional world.

In a time when the boundaries between education and industry are blurring, such engagements are crucial. They foster a culture of dialogue, insight, and preparedness. Sessions like this are more than just events—they are stepping stones toward the holistic transformation of students into industry-ready professionals.

As we look ahead, the takeaways from this interaction will undoubtedly shape the way we think, learn, and build our careers. The learnings from IBM's visit will stay with us as we continue to grow—not just as students of technology, but as stewards of the future.

As we walked out of the session hall, there was a noticeable shift—not just in what we knew, but in how we envisioned our future. The experience reaffirmed the power of corporate-academic partnerships in shaping tomorrow's

innovators. With minds brimming with ideas and hearts full of ambition, we now carry forward the spirit of this engagement into our own learning journeys. This session with IBM was not just an event—it was a catalyst. And as students of Woxsen, we remain committed to evolving, adapting, and contributing meaningfully to the world of technology.

We extend our heartfelt gratitude to IBM for their time, knowledge, and encouragement, and to Woxsen University for consistently bridging the gap between classroom theory and industry practice.

Woxsen Crypto Exchange (WCE): Reimagining Business Education Through Blockchain

At Woxsen University, we have always believed that education must evolve with the times—dynamic, interdisciplinary, and hands-on. As industries embrace decentralized systems, tokenization, and Web3 innovation, the world of business is changing rapidly. To prepare our students for this future, Woxsen has launched a pioneering initiative: the Woxsen Crypto Exchange (WCE) — a first-of-its-kind academic crypto exchange designed, developed, and run entirely in-house.

WCE is not just a project; it is a revolution in how we approach business education.

WCE enables students, faculty, and staff to trade departmental tokens using blockchain technology, replicating the experience of participating in decentralized finance (DeFi) ecosystems. Each academic department issues its own unique token, representing its intellectual and performance-based value in a vibrant, simulated crypto market. These tokens are influenced by real-time academic metrics such as student performance, research output, participation in events, innovation quotient, and other dynamic criteria.

By interacting with WCE, students don't just learn about token economics or blockchain —they live it. They analyze token volatility, track trends, perform peer-to-peer transactions, and build strategies based on live academic and institutional data.

In the process, they gain first-hand exposure to the core tenets of financial literacy, market psychology, digital asset management, and blockchain governance.

But the true brilliance of WCE lies in how it transforms abstract learning into tangible experience. Built in-house by a team of student-developers and faculty mentors, the platform is fully decentralized, secure, and transparent. With its user-friendly interface and real-time analytics, WCE serves as a digital sandbox where students can explore the high-stakes world of crypto trading.

The exchange also nurtures a culture of interdisciplinary collaboration. Students from business, technology, and design work together to make informed decisions on token strategies, improve UI/UX of the platform, ensure smart contract integrity, and apply behavioral economics to forecast token performance. .

In conclusion, the Woxsen Crypto Exchange is more than a platform—it is a paradigm shift. It reflects Woxsen's commitment to pushing boundaries, reimagining education, and embracing innovation not as a buzzword, but as a way of life. By merging blockchain with learning, WCE empowers students to not just keep pace with the digital revolution—but to lead it.

Let me know if you'd like a shorter version for a teaser box or some infographic taglines to go along with it.

SCIENCE AND TECHNOLOGY NEWS

Month in Review: July at Woxsen University

July was a month marked by innovation, engagement, and academic vigor at Woxsen University. From groundbreaking initiatives like the launch of the Woxsen Crypto Exchange (WCE) to thought-provoking corporate alignment sessions with industry leaders such as IBM, the campus buzzed with activity that bridged theory with real-world relevance. Students showcased their entrepreneurial spirit through hands-on tech projects, while faculty-led workshops and guest lectures enriched the academic discourse. Cultural clubs kept the community connected with vibrant events, and collaborative efforts across departments reflected Woxsen's commitment to holistic, future-ready education. As the semester gains momentum, July set a high benchmark—reminding us that at Woxsen, every month is a step closer to shaping bold leaders of tomorrow.

FROM CLASSROOMS TO CAREERS: WOXSEN'S BLUEPRINT FOR REAL-WORLD SUCCESS

Entrepreneurship Track

Dr. Bhargav Prajwal Pathri - SPOC

Overview:
The Entrepreneurship Track is designed to equip Computer Science & Engineering (CSE) students with the essential skills, mindset, and practical experience to ideate, build, and launch technology-based startups.
Spread across four semesters, this 16-credit program integrates entrepreneurship education with the core principles of technology, product design, innovation, and business strategy.

Program Outcomes:
Students develop at least one investor-ready startup proposal.
Gain real-world entrepreneurial experience.
Learn to apply CS skills to market-driven innovations.
Understand ethics, IP, legalities, and financial sustainability of startups.

Total Credits: 16 (4 credits per semester)
Duration: Semester V to Semester VIII

Semester V: Foundations of Entrepreneurship & Innovation
Course Title: Introduction to Entrepreneurship & Startup Mindset
Credits: 4
Milestone: Submit a validated problem-solution statement. Draft and present a Business Model Canvas.

Semester VI: Business Design & Strategy for Tech Startups
Course Title: Marketing, Business Strategy & Financial Planning for Startups
Credits: 4
Milestone: Prepare and present a pitch deck. Submit a marketing plan and financial forecast.

Semester VII: IP, Legal, Ethics & Funding
Course Title: Startup Compliance, IPR, and Funding Strategies
Credits: 4
Milestone: File a provisional patent or copyright (if applicable). Participate in a mock investor pitch.

Semester VIII: Product Development & Startup Launch
Course Title: Tech Product Development, Scaling, and Launchpad
Credits: 4
Milestone: Demo Day presentation of MVP to external panel. Submit go-to-market and scaling plan.

FROM CLASSROOMS TO CAREERS: WOXSEN'S BLUEPRINT FOR REAL-WORLD SUCCESS

Research Track

Dr. Segun Emmanuel Ibitoye - SPOC

Overview:
Aligned with Polaris philosophy. Builds scholarly rigor, critical thinking & domain expertise. Pathway to publications, patents, TRL progress, and PG/PhD admissions.

Program Outcomes:
Develop and submit a publication-ready research paper.
Draft patents or develop proofs of concept
Present at research symposiums or conferences.
Build a strong pre-PhD or PG admission portfolio.
Gain exposure to ethical research, data analytics, and funding proposals.

Total Credits: 16 (4 credits per semester)
Duration: Semester V to Semester VIII

Semester V: Research Fundamentals & Ideation
Course Title: Research Orientation & Methodology
Credits: 4
Milestone: Submit a validated research proposal with gap analysis. Present TRL level assessment and roadmap.

Semester VI: Proposal Development & Planning
Course Title: Advanced Research Tools & Proposal Building
Credits: 4
Milestone: Submit a detailed research proposal with objectives and methodology. Conduct preliminary data collection or simulations.

Semester VII: Research Execution & Review
Course Title: Research Project Implementation
Credits: 4
Milestone: Present Mid-Term Review to internal panel. Submit partial draft of research paper or patent outline

Semester VIII: Major Research Dissertation (MRD)
Course Title: Major Research Dissertation
Credits: 4
Milestone: Final defense presentation to internal & external reviewers. Submit final research paper (journal-ready or conference format). Submit optional patent draft or proof of concept prototype. Present in Research Symposium or equivalent event.

FROM CLASSROOMS TO CAREERS: WOXSEN'S BLUEPRINT FOR REAL-WORLD SUCCESS

Government and Public Sector Track

Dr. Brundaban Mishra - SPOC

Overview:
The Public Services Track is tailored for students aspiring to build impactful careers in the government sector, public sector undertakings (PSUs), and civil services. Spanning four semesters, this 16-credit program provides the skills, knowledge, and exam preparedness required for prestigious roles in UPSC, SSC, Banking, Railways, Judiciary, and PSUs. With a focus on strategy, aptitude, and structured mentorship, students develop strong foundations for nation-building careers.

Program Outcomes:
Develop and submit a publication-ready research paper.
Draft patents or develop proofs of concept
Present at research symposiums or conferences.
Build a strong pre-PhD or PG admission portfolio.
Gain exposure to ethical research, data analytics, and funding proposals.

Total Credits: 16 (4 credits per semester)
Duration: Semester V to Semester VIII

Semester V: Foundations of Government Careers
Course Title: Introduction to Public Services and Career Pathways
Credits: 4
Milestone: Attempt a mock test covering basic GS and aptitude.

Semester VI: Aptitude and Communication Skills
Course Title: Competitive Aptitude, Communication & Ethics
Credits: 4
Milestone: Complete a sectional mock test (Quant, Verbal, Reasoning). Write an essay on a current policy issue. Present a 5-minute speech on a national topic.

Semester VII: Current Affairs & Governance
Course Title: Indian Polity, Governance & Contemporary Issues
Credits: 4
Milestone: Submit a Current Affairs Journal (weekly news log + analysis). Attempt a full-length mock UPSC/SSC test paper. Conduct a peer-led policy debate.

Semester VIII: Exam Simulation & Strategy
Course Title: Civil Services Preparation & Personality Development
Credits: 4
Milestone: Attempt full-length GS + Aptitude mock test, mock-interview.

FROM CLASSROOMS TO CAREERS: WOXSEN'S BLUEPRINT FOR REAL-WORLD SUCCESS

Industry Track

Prof. Madhav Medicherla - SPOC

Total Credits: 16 (4 credits per semester)
Duration: Semester V to Semester VIII

Overview:

The Industry Certification Track is a strategic program that equips students with globally recognized certifications from top technology platforms like IBM, PEGA, and Salesforce. Focused on bridging the gap between academia and real-world skill demands, this track enhances students' employability, technical credibility, and industry readiness. By aligning with current market trends, students gain hands-on experience with tools and frameworks used in the FinTech, AI, Cloud, Low-Code, and CRM domains.

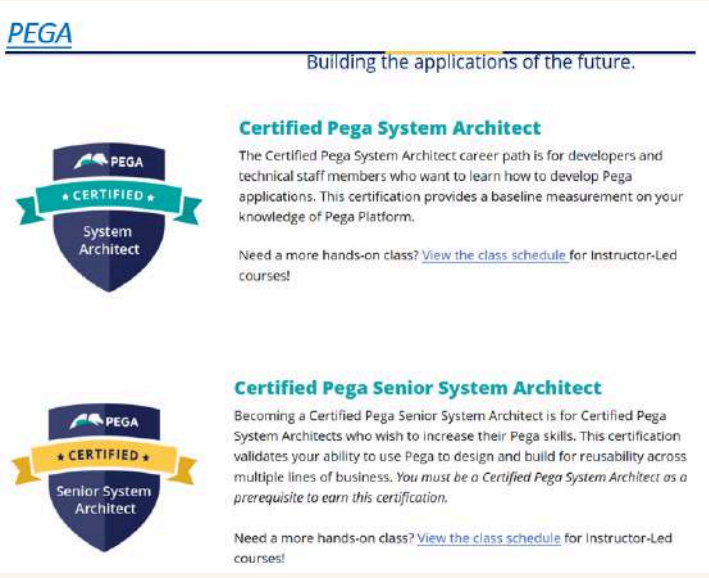
Program Outcomes:

Earn professional certifications from IBM, PEGA, Salesforce, and other emerging platforms. Develop real-time project and product development experience aligned with certification goals. Improve placement readiness through domain-specific expertise in low-code, automation, and analytics. Get exposure to digital transformation practices and tools used in top companies.

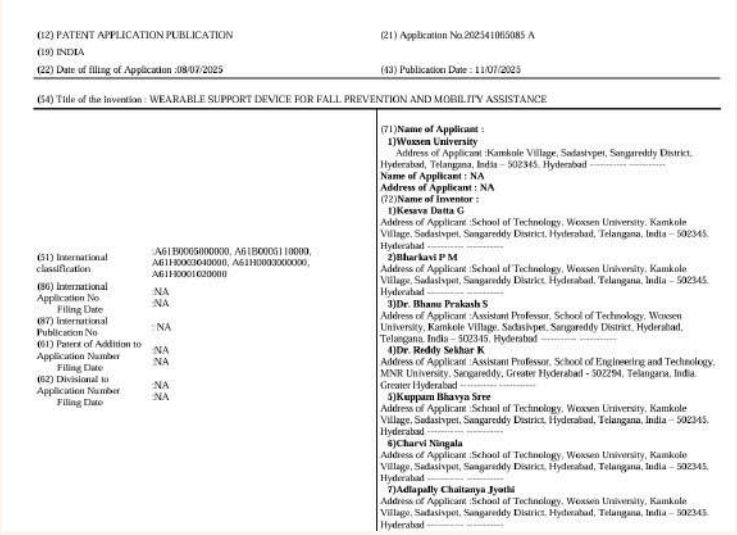
SKILL ENHANCEMENT journey with IBM Certificate

Semester	IBM - AI and Deep L track	IBM - BIG DATA track	IBM - Cloud and Sequrity track
1st Sem			
2nd Sem			
3rd Sem			
4th Sem			
5th Sem	ML using Watson Studio	Business Intelligence using cognos	Application security
6th Sem	Predective alalysis with Intelligence	Predective alalysis and Big data architechure	Security Intelligence using IBM Qradar
7th Sem	AI engineer with Big data	AI engineer with Big data	AI engineer with Big data
8th Sem	Deep learning	Deep Analycs Edion - OneWEX	Block chain Developer

Salesforce



FACULTY ACHIEVEMENTS



(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :08/07/2025
(21) Application No.202541065085 A
(43) Publication Date : 11/07/2025

(54) Title of the Invention : WEARABLE SUPPORT DEVICE FOR FALL PREVENTION AND MOBILITY ASSISTANCE

(51) International classification :A61B0005000000, A61B0005110000, A61H0003040000, A61H0003000000, A61H0001020000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No :NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

(71)**Name of Applicant :**
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Name of Applicant : NA
Address of Applicant : NA
(72)**Name of Inventor :**
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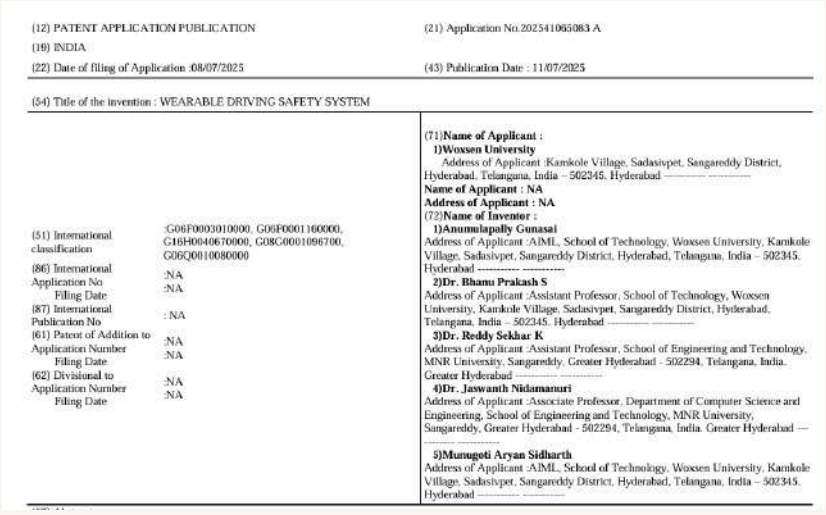
Dr. Bhanu Prakash

Along with others published a Patent on Wearable Support Device for fall prevention and Mobility Assistance.

Dr. Bhanu Prakash

Along with others published a Patent on Wearable driving safety system.



(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :08/07/2025
(21) Application No.202541065083 A
(43) Publication Date : 11/07/2025

(54) Title of the invention : WEARABLE DRIVING SAFETY SYSTEM

(51) International classification :G06F0003010000, G06F0001160000, G16H0040670000, G08G0001096700, G06Q0010080000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No :NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

(71)**Name of Applicant :**
1)Woxsen University
Address of Applicant :Kamkole Village, Sadasivpet, Sangareddy District, Hyderabad, Telangana, India – 502345. Hyderabad
Name of Applicant : NA
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3)Dr. Reddy Sekhar K
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The Patent Office, Government Of India
Certificate of Registration of Design

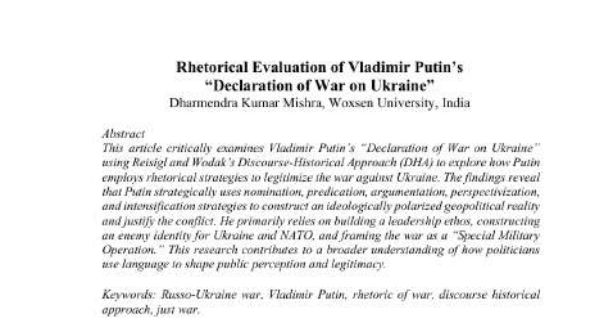
Dr. Bhanu Prakash

Along with others published a Design Patent on Iron Box.

FACULTY ACHIEVEMENTS

Dr. Dharmendra Kumar Mishra

Published an article on Rhetorical Evaluation of Vladimir Putin's "Declaration of War on Ukraine" .



Rhetorical Evaluation of Vladimir Putin's "Declaration of War on Ukraine"

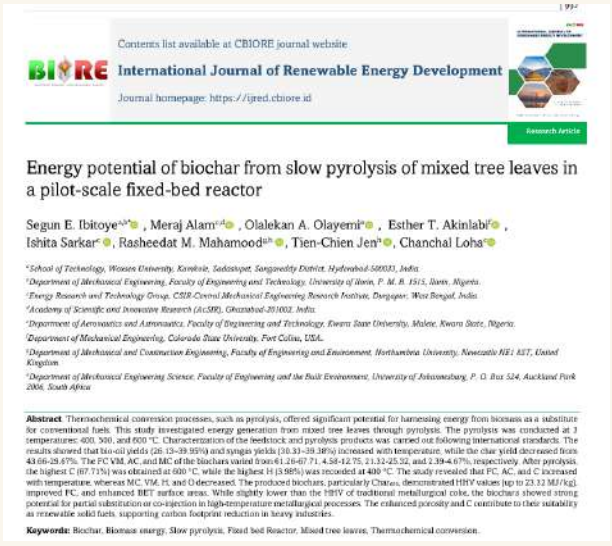
Dharmendra Kumar Mishra, Woxsen University, India

Abstract

This article critically examines Vladimir Putin's "Declaration of War on Ukraine" using Reisigl and Wodak's Discourse-Historical Approach (DHA) to explore how Putin employs rhetorical strategies to legitimize the war against Ukraine. The findings reveal that Putin strategically uses nomination, predication, argumentation, perspectivization, and intensification strategies to construct an ideologically polarized geopolitical reality and justify the conflict. He primarily relies on building a leadership ethos, constructing an enemy identity for Ukraine and NATO, and framing the war as a "Special Military Operation." This research contributes to a broader understanding of how politicians use language to shape public perception and legitimacy.

Keywords: Russo-Ukraine war, Vladimir Putin, rhetoric of war, discourse historical approach, just war.

Dr. Segun Ibitoye Emmanuel



Contents list available at CBIORE journal website

BIORE International Journal of Renewable Energy Development

Journal homepage: https://ijred.cbiore.id

Research Article

Energy potential of biochar from slow pyrolysis of mixed tree leaves in a pilot-scale fixed-bed reactor

Segun E. Ibitoye, Meraj Alam, Olalekan A. Olayemi, Esther T. Akinlabi, Ishita Sarkar, Rasheedat M. Mahamood, Tien-Chien Jen, Chanchal Loha

His article titled "Energy potential of biochar from slow pyrolysis of mixed tree leaves in a pilot-scale fixed-bed reactor" was published in International Journal of Renewable energy Development.

Dr. Segun Ibitoye Emmanuel

SURVEY ARTICLE OPEN ACCESS

Safety Considerations in Deployment of Robotic Systems – A Systematic Review

Adedire D. Adesiji | Segun E. Ibitoye | Rasheedat M. Mahamood | Olalekan A. Olayemi | Peter O. Omoniyi | Tien-Chien Jen | Esther T. Akinlabi

Published an article on Safety Considerations in deployment of Robotic Systems - A Systematic Review in the Journal of Field Robotics.

FACULTY ACHIEVEMENTS

Dr. Santosh Kumar Thatikonda

Published an article on Enhancing electrochemical performance in an Elsevier Journal.

Prof. Meher Gayatri Devi Tiwari

Published patents named as “Handheld Cybersecurity Scanning Device” and “Autonomous Cybersecurity Monitoring Robot” along with her students contributing to the work.

Dr. Dipak Kumar Sahoo

Published an article on Synthesis and characterization of fungal and loffa sponge biocomposite sorbet for the removal of acetaminophen.

STUDENTS' ACHIEVEMENTS

The month of July 2025 has been marked by commendable student achievements across diverse domains ranging from cutting-edge technologies to impactful social contributions.

Pragnan, in the Data Science Job simulation, has actively completed the practical tasks in Modeling Lounge eligibility at Heathrow Terminal 3, Predicting customer buying behaviour throughout July 2025 at Forage

G Bhavani Shant has received a Certificate of Registration of Design on "ROAD CONDITION MONITORING DEVICE", on 10 July 2025.

Shravani Wanjari published an article in IEEE on boost-based emotion classification in health care using electroencephalogram signals.


Deloitte.

Bharkavi P M

Data Analytics Job Simulation

Certificate of Completion

July 22nd, 2025

Over the period of June 2025 to July 2025, Bharkavi P M has completed practical tasks in:

Data analysis
Forensic technology

Tina McCreery
Chief Human Resources Officer,
Deloitte

Bharkavi in the Data Analytics Job simulation actively completed the practical tasks in Data analysis and Forensic technology from June 2025 to July 2025 at DELOITTE.

Geethika has completed the Internship in Data Science from 12-05-2025 to 12-07-2025 from JYESTA Corporate Entity.


JYESTA

INTERNSHIP CERTIFICATION

This is to certify that

Mr./Ms. GEETHIKA MITTAPALLI

Has successfully completed internship in

DATA SCIENCE

From 12-05-2025 To 12-07-2025

The trainee displayed commendable commitment, perseverance, and professionalism during the course of the internship.

Scan to verify

Issued on: 24-07-2025

Mourya N Manohar
Program Director

JC-20250724-SNDIFZ1L

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ORIGINAL

पेटेंट कार्यालय, भारत सरकार The Patent Office, Government Of India

डिजाइन के पंजीकरण का प्रमाण पत्र | Certificate of Registration of Design

डिजाइन सं. / Design No. 452276-001

तारीख / Date 20/03/2025

पारस्परिकता तारीख / Reciprocity Date*

देश / Country

प्रमाणित किया जाता है कि संलग्न प्रति में वर्णित डिजाइन जो AIR QUALITY MONITORING IOT DEVICE से संबंधित है, का पंजीकरण, वर्ग 10-05 में 1.Roopa Vuppula 2. Dr. Kiran Siripuri 3.Chris Jose 4.Ipshita Chauhan 5.Banreddy Rahul Reddy 6.Syed Ayaan Ahmed 7.Bharkavi P M 8.Chaitanya Jyothi. A के नाम से उपर्युक्त संख्या और तारीख में कर लिया गया है।

Certified that the design of which a copy is annexed hereto has been registered as of the number and date given above in class 10-05 in respect of the application of such design to AIR QUALITY MONITORING IOT DEVICE in the name of 1.Roopa Vuppula 2. Dr. Kiran Siripuri 3.Chris Jose 4.Ipshita Chauhan 5.Banreddy Rahul Reddy 6.Syed Ayaan Ahmed 7.Bharkavi P M 8.Chaitanya Jyothi. A.

डिजाइन अधिनियम, 2000 तथा डिजाइन नियम, 2001 के उपबंधों के अनुसरण में।

In pursuance of and subject to the provisions of the Designs Act, 2000 and the Designs Rules, 2001.

Chris Jose has received a Certificate of Registration of Design on "Air quality monitoring IoT device", on 1 July 2025.

Intouch

Date: 8th July, 2025

Certificate of Internship

This is to certify that **Ms. T Gowri Priya** was associated with us as an **Intern** in IT Department from **01st May, 2025** to **01st July, 2025.**

Her sincere efforts during the period are appreciated.

24-7 INTOUCH INDIA PVT. LTD.

Suresh Kumar Yalamanchili
Sr. Manager HR

Gowri Priya T was associated with Intouch as an Intern from 1 May 2025 to 1 July 2025.

We're proud to spotlight **Yagnashri** and **Keerthana**, B.Sc. (Hons.) 3rd year students from Woxsen University, who have successfully completed their internship at Manna Biotech.

पेटेंट कार्यालय, भारत सरकार The Patent Office, Government Of India
डिजाइन के पंजीकरण का प्रमाण पत्र | Certificate of Registration of Design

डिजाइन सं. / Design No: 452528-001
तारीख / Date: 22/3/2025
परस्परिकता तारीख / Reciprocity Date*:
देश / Country:

प्रमाणित किया जाता है कि संलग्न प्रति में वर्णित डिजाइन जो *HANDHELD CYBERSECURITY SCANNING DEVICE* से संबंधित है, का पंजीकरण, क्रमांक 14-02 में 1.Meher Gayatri Devi Tiwari 2. Dr. Kiran Siripuri 3.Mohammed Aqib 4.Aditya Dey 5.Mohammed Mubasheer 6.Nikhil Reddy 7.Mohammed Adeeb Ehtesham 8.Mohammad Affaan के नाम में उपर्युक्त संख्या और तारीख में कर लिया गया है।

Certified that the design of which a copy is annexed hereto has been registered as of the number and date given above in class 14-02 in respect of the application of such design to *HANDHELD CYBERSECURITY SCANNING DEVICE* in the name of 1.Meher Gayatri Devi Tiwari 2. Dr. Kiran Siripuri 3.Mohammed Aqib 4.Aditya Dey 5.Mohammed Mubasheer 6.Nikhil Reddy 7.Mohammed Adeeb Ehtesham 8.Mohammad Affaan.

डिजाइन अधिनियम, 2000 तथा डिजाइन नियम, 2001 के उपबंधों के अनुसरण में।
In pursuance of and subject to the provisions of the Designs Act, 2000 and the Designs Rules, 2001.

Mohammad Aqib, Aditya Dey, Mohammed Mubasheer and Nikhil Reddy received a Certificate of Registration of Design on "Handheld Cybersecurity Scanning Device".

Sreeharshith Reddy C, Krishna Sankeerth P and Ruthwika P.S.M received a Certificate of Registration of Design on "Autonomous Cybersecurity Monitoring Robot".

पेटेंट कार्यालय, भारत सरकार The Patent Office, Government Of India
डिजाइन के पंजीकरण का प्रमाण पत्र | Certificate of Registration of Design

डिजाइन सं. / Design No: 456136-001
तारीख / Date: 21/04/2025
परस्परिकता तारीख / Reciprocity Date*:
देश / Country:

प्रमाणित किया जाता है कि संलग्न प्रति में वर्णित डिजाइन जो *AUTONOMOUS CYBERSECURITY MONITORING ROBOT* से संबंधित है, का पंजीकरण, क्रमांक 14-02 में 1.Meher Gayatri Devi Tiwari 2. Dr. Kiran Siripuri 3.Choudavaram Sreeharshith Reddy 4.Krishna Sankeerth Pagoti 5.M. Ruthwika Prakash 6.Nirmal Choyal 7.Dhanya Sri के नाम में उपर्युक्त संख्या और तारीख में कर लिया गया है।

Certified that the design of which a copy is annexed hereto has been registered as of the number and date given above in class 14-02 in respect of the application of such design to *AUTONOMOUS CYBERSECURITY MONITORING ROBOT* in the name of 1.Meher Gayatri Devi Tiwari 2. Dr. Kiran Siripuri 3.Choudavaram Sreeharshith Reddy 4.Krishna Sankeerth Pagoti 5.M. Ruthwika Prakash 6.Nirmal Choyal 7.Dhanya Sri.

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In pursuance of and subject to the provisions of the Designs Act, 2000 and the Designs Rules, 2001.

NEUROCARDIAC AI: A MULTIMODAL DEEP LEARNING FRAMEWORK FOR PREDICTING COGNITIVE DECLINE IN CARDIOVASCULAR PATIENTS

Cardiovascular diseases are a leading global health burden, traditionally associated with heart-related morbidity and mortality. However, recent research highlights a significant and underdiagnosed connection between CVDs and cognitive impairment. Conditions such as atrial fibrillation, chronic hypertension, and heart failure can compromise cerebral blood flow, leading to subtle but progressive neurological changes, including memory loss, impaired executive function, and eventually vascular dementia. Despite the growing recognition of this neurocardiac axis, clinical practice often treats cardiac and cognitive disorders in isolation, delaying timely intervention.

This research proposes the development of a Neurocardiac AI —an artificial intelligence-based cognitive model that continuously simulates the interaction between a patient's cardiovascular and neurological states. The objective is to predict early signs of cognitive decline in patients with cardiovascular risk, enabling clinicians to act before irreversible damage occurs.

The system integrates multimodal data, including:

Cardiac indicators (e.g., ECG, heart rate variability, and blood pressure)

Neurological inputs (e.g., EEG, pupillary response, and speech patterns)

Cognitive metrics (e.g., attention span, memory recall, and reaction time)

Wearable sensor data to capture daily physiological trends.

Using transformer-based deep learning models and spatiotemporal architectures, the AI identifies hidden patterns across these modalities. The model is further enhanced with reinforcement learning, allowing it to simulate responses to interventions such as medication adjustments, cognitive therapy, or surgical treatments like pacemaker implantation.

The proposed framework offers three key innovations:

Early risk prediction of cognitive decline linked to cardiac dysfunction.

Simulation of therapeutic outcomes, enabling personalized treatment strategies.

Real-time monitoring, particularly valuable in post-operative care and remote health settings.

NEUROCARDIAC AI - CONTD...

This approach is expected to support clinicians in triaging high-risk patients, monitoring post-cardiac cognitive recovery, and improving long-term quality of life for individuals vulnerable to neurocardiac complications.

By bridging the disciplines of cardiology, neurology, and artificial intelligence, Neurocardiac AI presents a novel, actionable pathway for predictive and preventive care. This research aligns with the global move toward precision medicine, emphasizing proactive diagnostics and tailored treatment over reactive care thus by conclusion Neurocardiac AI represent a transformative step toward integrated, predictive healthcare. By modelling heart-brain interactions using advanced AI, this approach enables early detection of cognitive decline in cardiac patients, supports personalized interventions, and reinforces the shift toward proactive, precision medicine in both neurology and cardiology

By Damaruk Abhishek

CRISPR: A REVOLUTIONARY DEVELOPMENT IN GENETIC TECHNOLOGY

CRISPR (pronounced "crisper") is a newly developed type of gene editing technology that has changed the field of genetic and biotechnology. CRISPR stands for "Clustered Regularly Interspaced Short Palindromic Repeats" which are a natural source of genetic information that bacteria use as a defence. Scientists harnessed this naturally occurring system to provide very fast, precise and efficient DNA editing.

The central tenet of CRISPR technology is that it is associated with a protein called Cas9 (CRISPR-associated protein 9) which behaves like a pair of molecular scissors. It can actually cut the DNA directly at the target site according to a strand of RNA complementary to the target sequence. After DNA is cut scientists can modify a gene by adding, deleting or replacing parts.

CRISPR has tremendous implications in new applications in medical, agricultural and biological domains. In medicine, it holds promise for curing genetic disorders such as sickle cell disease, cystic fibrosis and certain cancers. Researchers are also exploring its use in dealing with infectious diseases through editing the gene sequences of either the virus itself or the immune system's response to that virus.

In agriculture, CRISPR is being utilized to genetically modify crops in ways that make them less vulnerable to pest, diseases and environmentally induced stresses.

CRISPR: A REVOLUTIONARY DEVELOPMENT IN GENETIC TECHNOLOGY

The CRISPR process is more precise and makes modifications without foreign DNA unlike prior types of genetic modification which involve foreign DNA and therefore face lower acceptance and stricter regulatory requirement by the public.

Although CRISPR holds great potential, it raises serious ethical and safety concerns. Consider using CRISPR to edit human embryos, There would be numerous political controversies over the unintended consequences of humans being able to pass the CRISPR modification down to subsequent generations. There is also the potential for undesired consequences like off-target effects which may edit locations or genes.

In summary, CRISPR is one of the most powerful tools in genetic science not only can potentially cure diseases better secure food for the sustainable future but it will help broaden how we understand life. However, in the case with any type of caution, we must use this power specifically cautiously and ethically within reasonable regulations.

By Ojashwini Dubey

GREY WALLS, GREEN DREAMS : A DAY AT WOXSEN

In the verdant expanse, where nature thrives,
It's a busy world at Woxsen learning comes alive.
Adventure stirs in every leaf and breeze,
Beyond labs and codes under canopies of trees.

Grey walls rise not bland, but bold,
A canvas for disruption, where dreams unfold.
Each corridor pulses with innovation's beat,
Applied learning meets nature in every heartbeat.

Vision and mission carve our path by design:
Global minds, inclusive, ready to redefine.
Connectivity with industry turns theory to skill,
Research and real-world growth aligned with Woxsen's will.

Laptops hum in the open air at dawn,
Safari-like walks between classes carry us on.
Grey isn't dull it's resilience in every hue,
The backdrop for creativity, sustainability, growth too.

At SoT, nature and tech buzzed harmony each day,
Busy, adventurous, transformative that's the Woxsen way.

The Silent Pen

PUZZLE TIME !!

Operation CodeBreak: The Data Vault Mystery

Background

A leading fintech startup has reported a suspected intrusion attempt into its secure data vault. The vault is protected by a 6-digit numeric access code, known only to the core security team. The attacker intercepted clues about the code's structure during a network sniffing operation, but it's up to you, the incident response analyst, to piece them together and unlock the code before the intruder does.

Rules for the Access Code:

1. The code contains exactly 6 digits (0–9).
2. The sum of the first three digits equals the sum of the last three digits.
3. The product of the first and last digit is 24.
4. The middle two digits (3rd and 4th digits) form a two-digit prime number.
5. The full 6-digit number is divisible by 11.

Your Task:

Analyze the rules, identify the pattern, and determine the exact 6-digit access code.

Hint:

Remember the divisibility rule for 11:
The difference between the sum of the digits in odd positions and the sum of the digits in even positions must be divisible by 11 (including 0).

Got it? Or think you do? Hold tight the vault opens in the next edition of SciTech Chronicles.

ANSWERS FOR THE PREVIOUS PUZZLE

Terminal Access – Level 7

Last Edition you were presented with a 7-digit binary challenge to unlock your user privileges. Four code attempts had already been made, each with feedback on how many bits were correct in both value and position.

Let's compare Attempts 3 and 4:

- 0110110 → 4 correct
- 0011110 → 5 correct

Notice they both end in 110, and all attempts with that ending score high (e.g., attempts 3 & 4).

So, last 3 digits likely are 110.

Try isolating differences:

- Attempt 3 vs. Attempt 4:
  - 0110110
  - 0011110
  - Only difference is in the first two bits:
    - 01 vs 00 → and that change increased correct bits from 4 to 5 → means 0 is correct in both positions.

So far, we have:

- 00 _ _ _ _ 1 1 0 (5 known)

Let's cross-check with attempt 1 (1011010 → 3 correct).

Compare with 0011110 (5 correct):

They differ in first bit (1 vs 0), fifth bit (0 vs 1), and last bit (0 vs 0) → same. So 0 at first position is correct → confirms position 1 = 0.

Continue this process...

Eventually, we deduce the full code:

!! Final Access Code: 0011110

Every bit logically verified.

Access Granted. Level 7 Mainframe Unlocked.

Editor's Note

August 2025 Edition

The School of Technology at Woxsen University enters this academic year with strong momentum ranking #12 among India's top private B.Tech institutions and forging a landmark MoU with IBM India to deliver industry integrated learning and global certifications.

From the success of the Experiential Learning Project to rising placement figures 19.1% growth in average CTC our students are proving their readiness for real-world challenges. With cutting-edge research, global collaborations, and hands-on innovation at the core, this year promises to turn potential into impact.

A note from our Senior Editor - Miss. Deepti Kalakoti. As the new edition releases and I part my ways from the editor's team of Scitech Chronicles, I wish everyone to enjoy the forthcoming editions and shower the team with appreciation and positive critics!

This has been a journey of creativity and proven to be insightful in many terms and I am beyond happy to have been a part of this. Signing off!

Editor's Note

We invite students and faculty to share your stories, achievements, and ideas for upcoming editions of SciTech Chronicles. Whether it's a breakthrough project, a global experience, or a classroom innovation your journey can inspire others. Let's make this platform a true voice of our School.

Big or small, every step you take shapes our story. Let's tell it together in SciTech Chronicles.

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