Hon'ble Dr. Patangraoji Kadam Saheb
Founder, Bharati Vidyapeeth

Blessings

Bharati Vidyapeeth's College of Engineering for Women, Pune

e-newsletter

Hon'ble Dr. Patangraoji Kadam Saheb
Founder, Bharati Vidyapeeth

Participation of women in technology is an important aspect in social and economic development of the nation. It is a critical constituent in the process of improving the quality of life of women themselves. When women have economic empowerment, it is a way for others to see them as equal members of society. Through this, they achieve more self-respect and confidence by their contributions to their communities. As women play key roles in social transformation, Hon'ble Dr. Patangraoji Kadam Saheb established Bharati Vidyapeeth's College of Engineering for Women, Pune in June 2000 with the vision, "Women empowerment through Technical Education" and provided opportunity to women for higher education in the field of technology. The institute was started exclusively for women and it is running with 100% women students. Establishing and running Women Engineering College really contributes to social transformation through dynamic education which is the vision of Bharati Vidyapeeth.

Bharati Vidyapeeth's College of Engineering for Women, Pune

Pune-Satara Road, Dhankawadi, Pune 411043
Recognized by AICTE, New Delhi, DTE Mumbai, Affiliated to Savitribai Phule Pune University
Accredited by NAAC with "A" Grade
Id No.: PU/PN/Engg./150/2000, DTE College Code: EN6285
Phone: (020)24371684, (020)24361732 Fax: (020) 24372210
Email: coewpune@bharatividyapeeth.edu, Website: http://coewpune.bharatividyapeeth.edu

Undergraduate Programme

Sr. No.	Course	Intake	Course Code
1	B.E. Artificial Intelligence and Machine Learning (AI & ML)	60	628592150F
2	B.E. Computer Engineering (CE)	180	628524550F
3	B.E. Electronics and Telecommunication Engineering (E & TC)	120	628537250F
4	B.E. Information Technology (IT)	60	628524650F

Post Graduate Programme

Sr. No.	Course	Intake	Course Code
1	M.E. (Computer Engineering)	12	628524550F
2	M.E. (E & TC-VLSI & Embedded System)	9	628534150F

Research Centre

Course
Ph.D.(Doctoral Program in Electronics and Telecommunication Engineering)

Vision:

- Women Empowerment through Technical Education

Mission:

- Develop women students to rise to their full potential.
- Impart knowledge and prepare competent engineers.

Special Features:

- Best Engineering College with an All India Rank of 61 in THE WEEK-HANSA Research Survey 2024, securing All India Rank 35 among private engineering colleges and an impressive West Zone Rank 11.
- Received "Best Women College of the Year 2019" Award.
- Recipient of "College of Substance" Award.
- The oldest engineering college "exclusively for women".
- All government scholarships are applicable for eligible students.
- Placement opportunities in multinational companies with 100% assistance.
- Excellent university results and tradition of consistent university rank holders.
- MOUs with reputed industries and academia.
- On campus hostel facility with 24 × 7 security.
- DTE approved e-Scrutiny centre for admissions.

Facebook: https://www.facebook.com/Bharati-Vidyapeeth-College-of-Engineering-for-Women-Pune-1599060517007121

Instagram: https://instagram.com/bvcoew_pune?igshid=ep1a85ikhj6s

राष्ट्रीय मूल्यांकन एवं प्रत्यायन परिषद

विश्वविद्यालय अनुदान आयोग का स्वायत्त संस्थान

NATIONAL ASSESSMENT AND ACCREDITATION COUNCIL

An Autonomous Institution of the University Grants Commission

Certificate of Accreditation

The Executive Committee of the
National Assessment and Accreditation Council
is pleased to declare
Bharati Vidyapeeth's
College of Engineering for Women
Dhankawadi, Tal. Haveli, Dist. Pune,
affiliated to Savitribai Phule Pune University, Maharashtra as
Accredited
with CGPA of 3.15 on four point scale
at A grade
valid up to October 24, 2029

Date : October 25, 2024

Director

35505

EC(SC)/222/2nd Cycle/MHCOGN100226

Principal's Message

Prof. Dr. Pradeep V. Jadhav

Principal

Dear Students, Parents, and Stakeholders,

Warm Greetings from Bharati Vidyapeeth's College of Engineering for Women, Pune!

It gives us immense pride to present the latest edition of our e-newsletter "Blessings..." (Vol. 7, Issue 2) for the academic year 2024-25. This issue is especially significant as BVCOEW celebrates its Silver Jubilee - 25 years of excellence in technical education and women empowerment. We are proud to share that our institute has been reaccredited by NAAC with an 'A' grade, has applied for NBA accreditation, and actively participates in the NIRF ranking every year.

The newsletter highlights various academic and technical achievements of the semester, showcasing the vibrant campus life driven by our dedicated faculty and talented students. A major milestone this year includes the launch of a new UG program in Artificial Intelligence & Machine Learning with an intake of 60 students, and a PG program in Computer Engineering with 12 seats. We are also proud to be recognized as a Ph.D. Research Centre in Electronics and Telecommunication Engineering under SPPU.

Our first-year intake is now 420 students, reflecting the growing trust of the academic community in our institution. The issue also celebrates the dynamic student-led initiatives and technical events that continue to nurture innovation, leadership, and holistic development.

Special thanks to Newsletter Coordinator Prof. Dr. Deepali Godse, Chief Editors, and the entire editorial team for their sincere efforts in curating this enriching edition.

Internal Quality Assurance Cell (IQAC)

IQAC Objectives:

- To imbibe quality environment at institute in all academic and administrative processes.
- To be instrumental in review of teaching learning process, structures, methodologies and student centric methods for achieving best educational environment.

Roles and responsibilities of IQAC:

- Keeping regular updates of NAAC and other quality improvement circulars.
- Conducting regular meetings of IQAC.
- Preparing Strategic plan of the institute.
- Preparation and submission of Annual Quality Assurance Report (AQAR) yearly.
- Maintaining academic records and conducting various audits at required intervals.
- Taking review of updating and updation of hardware and software requirements and internet facilities.
- Updating feedback forms as per guidelines from regulatory bodies.
- Providing guidelines for implementing ERP.
- Organizing various technical and nontechnical events.
- Preparation of reports of various activities for quality improvement.

Members List:

Sr. No.	Name of the IQAC Member	Designation	Position
1	Prof. Dr. P.V.Jadhav	Head of the Institute	Chairperson
2	Dr. K.D.Jadhav	Joint Secretary of Bharati Vidyapeeth	Member of Management
3	Dr. S. F. Patil	Executive Director of Bharati Vidyapeeth	Member of Management
4	Prof. Dr. S.R Patil	HOD, E & TC Engineering	Teacher Representative
5	Prof. Mrs. Khot S.T	Training cell Coordinator	Teacher Representative
6	Prof. Dr. V. R. Pawar	Academic & Research Coordinator	Teacher Representative
7	Prof. Dr. S. M. Rajbhoj	Industry institute Interaction	Teacher Representative
8	Prof. Ms. K. D. Mahajan	Alumni Coordinator	Teacher Representative
9	Prof. Mr. D. D. Pukale	HOD, Computer Engineering	Teacher Representative
10	Prof. Mrs. P. D. Kale	Placement cell Coordinator	Teacher Representative
11	Prof. Dr. D. A. Godse	HOD, Information Technology	Teacher Representative
12	Prof. Dr. K. A. Malgi	ICT & IT Infrastructure Coordinator	Teacher Representative
13	Prof. Dr. A. M. Pawar	HOD, Engineering Sciences and Allied Engineering	Teacher Representative
14	Mrs. Vaishali Kadam	Office Superintendent	Admin. Representative
15	Dr. V.M. Mohite	Librarian	Admin. Representative
16	Mr. Nityanand Prabhutendolkar	Chief Technical Officer, Ergen Technovation Pvt. Ltd.	Industry Representative
17	Mr. Sanjaykumar Gupta	Parent	Parent Representative
18	Ms. Shital Patil	Alumna (IT)	Alumni Representative
19	Ms. Khushi Mittal	Student (E & TC)	Student Representative
20	Prof. Dr. S. S. Chorage	Professor (E & TC)	Coordinator of the IQAC

From the Desk of Coordinator...

Prof. Dr. D. A. Godse
Newsletter Coordinator

Dear Stakeholders,

Greetings!

As shared in our previous e-newsletter, our institute has been accredited with an "A" grade in NAAC Cycle 2, an important milestone coinciding with our Silver Jubilee Year. This achievement reflects the dedication of our students, faculty, and staff, along with the unwavering support of our management and stakeholders. Guided by our vision of "Women Empowerment through Technical Education," we are now progressing toward NBA accreditation, confident that the blessings of our revered founder, Hon. Dr. Patangraoji Kadam Saheb, will continue to inspire us.

The semester was marked by impactful activities, including an International Conference, symposia, and an IIT-sponsored workshop, fostering a culture of innovation and research. We are now preparing for our second International Conference, focusing on enhancing research involvement among students and faculty. In alignment with the National Education Policy (NEP), the revised second-year curriculum has been implemented by Savitribai Phule Pune University.

We celebrated International Women's Day through INOAUG APEX UTSAV 2025 and hosted sports competitions, a technical festival, and our grand annual gathering, BharatiYugam 2025, each with great zeal and distinguished guests.

This edition of our newsletter captures highlights from these events. I sincerely thank our respected Principal, Prof. Dr. Pradeep Jadhav; Heads of Departments; dedicated faculty and staff; and enthusiastic students for their contributions. I also extend appreciation to the editorial team for their meticulous efforts.

Finally, we are truly grateful to each of you, our stakeholders, for standing by us through our 25-year journey. We look forward to your continued partnership as we strive for sustained progress and excellence in the years ahead.

Department of Information Technology

Vision

Globally competent women engineers through excellence in IT education.

Mission

- *Develop requisite skills and competencies in the field of IT.*
- *Groom students for responsible and rewarding careers in the field of IT.*
- *Build confidence and personality development through curricular, co-curricular and extra-curricular activities.*

Program Educational Objectives (PEOs)

PEO 1:- To Possess strong fundamental concepts in mathematics, science, engineering, and Technology to address technological challenges.
PEO 2:- To Possess knowledge and skills in the field of Computer Science and Information Technology for analyzing, designing, and implementing complex engineering problems of any domain with innovative approaches.
PEO 3:- To Possess an attitude and aptitude for research, entrepreneurship, and higher studies in the field of Computer Science and Information Technology.
PEO 4:- To Have a commitment to ethical practices, societal contributions through communities, and life-long learning.
PEO 5:- To Possess better communication, presentation, time management, and teamwork skills leading to responsible & competent professionals and will be able to address challenges in the field of IT at the global level.

Program Outcomes (POs):

Graduates of IT program will be able to attain,

1. *Engineering Knowledge: Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems*
2. *Problem analysis: Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.*
3. *Design/development of solutions: Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.*

4. *Conduct investigations of complex problems: Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.*
5. *Modern tool usage: Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations.*
6. *The engineer and society: Apply reasoning informed by contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to professional engineering practice.*
7. *Environment and sustainability: Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.*
8. *Ethics: Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice*
9. *Individual and teamwork: Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings*
10. *Communication: Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.*
11. *Project management and finance: Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.*
12. *Life-long learning: Recognize the need for and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.*

Program Specific Outcomes (PSOs):

Upon successful completion of UG course in Information Technology, the Graduates will be able to attain following Program Specific Outcomes:

1. *Graduates will possess knowledge of IT infrastructure, data management systems, networking, and security.*
2. *Graduates will be able to understand and apply algorithmic techniques and programming skills for providing software solutions in the IT industry.*
3. *Graduates will be capable of acquiring and demonstrating technical competencies in emerging technologies of Information Technology.*

HOD's Message

Prof. Dr. D. A. Godse
Head of Information Technology Department

Respected Stakeholders,

It gives me immense pleasure to share that our institute has been awarded an "A" grade in the second cycle of NAAC accreditation. This remarkable achievement has been made possible through the collective support and good wishes of all our stakeholders—thank you for being a vital part of this success.

Building on this accomplishment, the Information Technology Department has now applied for NBA accreditation. Our team is putting forth dedicated efforts and high enthusiasm in preparing for this important milestone. We look forward to receiving your continued cooperation and support in this endeavour as well.

Our faculty members are deeply committed to nurturing students' skills and potential, guiding them to excel in various technical competitions and platforms. Alongside mentoring students, they actively participate in and contribute to institutional activities—be it organizing events, presenting research, or driving new initiatives that enrich our academic ecosystem.

During the last semester, our students have made us proud by participating in hackathons, coding contests, and paper presentations at both national and international levels. Several students have also received prestigious scholarships such as the Lila Poonawalla Foundation Scholarship, Persistent Foundation's Kiran Girls Scholarship, Reliance Foundation Undergraduate Scholarship, and Katalyst India's Katalyst scholarship.

Our department takes pride in fostering excellence in academics, research, and co-curricular pursuits. The achievements of our students and faculty add tremendous value and visibility to the institution.

Faculty members have also played a key role in organizing important events like symposiums and international conferences, and in contributing to the scholarly community through research presentations.

This e-newsletter is a testament to the collective energy, achievements, and collaborative spirit that define the IT Department. I extend my sincere gratitude to the editorial team for their hard work and commitment in compiling this edition. Their efforts help us stay informed and inspired.

Congratulations to all stakeholders for your continued involvement, encouragement, and belief in our vision. Your unwavering support has been instrumental in our sustained growth and in marking the Silver Jubilee celebration of our institute.

ANNUAL TECHNINCAL FESTIVAL: “BharatiYugam 2024-25”

Bharati Vidyapeeth’s College of Engineering for Women, Pune organized its Annual Technical Festival, “BharatiYugam 2025 – Transforming Dreams into Reality,” on 8th April 2025.

Bharati Vidyapeeth’s College of Engineering for Women, Pune, proudly celebrated its annual technical festival BharatiYugam 2025, marking a significant milestone in its Silver Jubilee Year. Centered around the inspiring theme "Transform Dreams into Reality", the event served as a dynamic platform for students and tech enthusiasts to turn visionary ideas into impactful innovations.

The inaugural ceremony was graced by distinguished dignitaries, including Chief Guest Hon’ble Dr. Asmita Tai Jagtap, Executive Director, Bharati Vidyapeeth Medical Foundation. The ceremony was further honored by the presence of Guests of Honor: Hon’ble Dr. Rajendrakumar Sharma (Director, Spel Technologies Pvt. Ltd.), Hon’ble Dr. Yogesh Pawar (Founder and Managing Partner, School of Inspirational Leadership), and Hon’ble Komal Machindar (Head, Delivery Excellence, LTIMindtree). The institutional leadership was represented by Principal Prof. Dr. P.V. Jadhav, Vice Principals Prof. Dr. S.S. Chorage and Prof. Dr. A.M. Pawar, whose presence added depth to the occasion.

The festival was convened by Prof. D. D. Pukale, with Prof. K. L. Patil and Prof. V. D. Kulkarni as Coordinators. Ms. Aishwarya Bhansali effectively led as the Student Coordinator, contributing to the event’s seamless execution.

BharatiYugam 2025 offered a vibrant blend of technical and non-technical events**,** ranging from Project Exhibition, Paper Presentation, Startup Idea Competition, Robo Race, Coding Competition**,** to Poster Presentation and Technical Quiz**.** On the creative front, Rangoli, Sketch Competition, Tote Bag Painting**,** and a special Photo Exhibition for faculty and staff infused cultural vibrancy into the atmosphere. With an overwhelming response of 342 student registrations from various colleges, the fest witnessed wide participation, highlighting its growing reputation. The synergy of meticulous planning, enthusiastic participation**,** and the unwavering support of faculty and staff under the visionary leadership of Principal Prof. Dr. Pradeep Jadhav truly embodied the spirit of “Teamwork makes the dream work”. BharatiYugam 2025 concluded on a high note, leaving behind a legacy of innovation, collaboration, and excellence—an inspiration for future endeavours.

Institute Level Activities

National Conference on "Interdisciplinary Advancements in Emerging Technologies" (IAET-2025) in presence of Hon'ble Dr. Rajendrakumar Sharma (Director, Spel Technologies Pvt. Ltd.), on Tuesday, 8th April, 2025

One-Day Symposium on "Oracle APEX Certification" with Guests of Honour Ms. Richard Dalvi, Mr. Santosh Kumar, Mr. Bharat Bhatia and Mr. Anuj Bhardwaj on 8th March 2025, featuring Women's Day celebration

Seminar on "Importance of Profile Building and Career Mapping", by Benita Albert organized under Career Guidance Cell

Awareness Session on "KAPILA" by Prof. Dr. Sharada Kore, Institute KAPILA Nodal Officer, for faculty and KAPILA club students organized by IPR Cell

Seminar on "Higher Studies in India and Abroad", by Mr. Ranjit Kalangutkar, guiding students on academic opportunities and pathways post-graduation organized under Career Guidance Cell

Two days' workshop on "Simulation and Modelling Using Python" for first-year students by Mr. Santosh Yadav, CADD Career organized by Institution Innovation Council Cell

Participation in "The SheInspire Hackathon 2025" organized by Zensar, a global IT Services Company, aimed at bringing together female developers, designers, and tech enthusiasts to collaborate on solving real-world problems through innovative solutions under Placement Cell

Two Days Workshop on Start-up and Self-Defence by Amol Nitave, CEO & Founder EvolvingX on 7th and 8th March 2025 under Training Cell

Major Technical Activity

Training Program on "Introduction to Python Programming & Machine Learning"

The Department of Information Technology successfully conducted a Training Program on "Introduction to Python Programming & Machine Learning" for SE IT students as a part of their placement preparedness initiative.

The training was conducted by Mr. Aniket Kulkarni, a distinguished resource person from Aptite Solutions, Pune, a reputed industry leader known for his innovative contributions to data-driven solutions and digital transformation.

This was a 30-hour certification course conducted from 04/03/2025 to 19/04/2025, aligned with Outcome-Based Education (OBE) principles, aiming to bridge the gap between academic learning and industry expectations.

Key Topics Covered:

- *Python syntax, data types, variables, and operators*
- *Conditional statements and loops*
- *Data structures: lists, tuples, sets, dictionaries*
- *Functions and modules*
- *File handling in Python*
- *NumPy and Pandas for data handling*
- *Exploratory Data Analysis (EDA)*
- *Data visualization using Matplotlib and Seaborn*
- *Introduction to supervised learning (e.g., Linear Regression)*
- *Basics of scikit-learn*

These modules were chosen to match the curriculum objectives and to enhance the technical skill set relevant to industry needs.

Course Outcomes (COs) Achieved through this Training Program:

- *CO1: Understand programming skills in core Python.*
- *CO2: Apply coding tasks related to conditional statements, loops, and sequences.*

- *CO3: Understand how to read and write files using Python libraries and perform Exploratory Data Analysis (EDA).*
- *CO4: Demonstrate the ability to analyse data and create visualizations.*
- *CO5: Design and evaluate supervised learning models using built-in Python functions.*

CO to Program Outcomes (PO) and Program Specific Outcomes (PSOs) Mapping:

CO	PO	PSO
CO1	PO1, PO2, PO12	PSO2, PSO3
CO2	PO1, PO5	PSO2
CO3	PO2, PO4, PO5	PSO1, PSO2
CO4	PO3, PO4, PO5	PSO3
CO5	PO5, PO11, PO12	PSO2, PSO3

Note:- Pos and PSOs are mentioned on Page no 7 and 8.

Alignment with Department Vision and Mission:

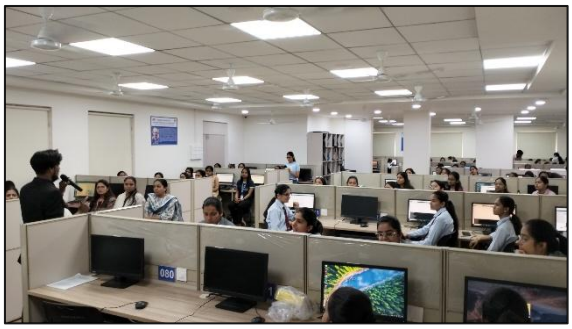
Department Statement	Alignment with Training Program
Vision: Globally competent women engineers through excellence in IT education.	Equips students with Python and ML skills sought by global tech industries.
Mission 1: Develop requisite skills and competencies in IT.	Builds coding, data handling, and analytical skills.
Mission 2: Groom students for responsible and rewarding IT careers.	Enhances employability through industry-relevant training.
Mission 3: Build confidence through curricular and extra-curricular activities.	Encourages student participation, hands-on learning, and interaction with experts.

Participation and Coordination:

A total of 70 SE IT students enthusiastically participated in this certification program. It was successfully coordinated by Dr. Nilofar Mulla, Assistant Professor, IT Department.

Training Program on "Introduction to Python Programming & Machine Learning"

Technical Activities



A hands-on workshop on “AI, IoT and Automation” by Mr. Santosh Yadav, Business & Technical Consultant – PTC Products, Tata Technologies

Seminar on “Significance of learning German Language” by Mr. Dipak Nakate, Shree Datta Language Classes, Dattanagar, Pune

Seminar on “International education and career Pathways Abroad” by Miss. Leena Mohile, Destination Head, Study Smart Overseas Education

BE(IT) Industrial Visit 2025 at Kimaya Infotech, Pune

Industrial Visit to COEP’s Bhau Institute of Innovation, Entrepreneurship, and Leadership for SE IT Students

Workshop on “Commit to Git A Beginner's Guide to GitHub” by Samiksha Pardeshi, Prachi Thakor, and Chetana Patil, TE IT Students for SE IT Students

Advanced Technology: Shaping the Future, Today

In the 21st century, the pace of technological advancement is nothing short of revolutionary. What was once science fiction—artificial intelligence, self-driving cars, augmented reality—is now part of everyday life. For college students preparing to enter a rapidly evolving world, understanding the foundations, applications, and implications of advanced technology is essential. This article breaks down key concepts in a way that's accessible, engaging, and relevant to your academic and professional future.

What is Advanced Technology?

Advanced technology refers to tools, systems, and methods that push the boundaries of current capabilities. It often includes cutting-edge innovations that improve speed, efficiency, and the scope of human activity. Examples include:

- *Artificial Intelligence (AI)*
- *Machine Learning (ML)*
- *Quantum Computing*
- *Biotechnology*
- *Nanotechnology*
- *Blockchain*
- *5G and Beyond*
- *Robotics and Automation*

These technologies are not isolated; they interact and integrate to power modern industries, from healthcare to finance to entertainment.

Key Areas of Advanced Technology

1. Artificial Intelligence & Machine Learning
AI mimics human intelligence through computer systems. Machine Learning (a subset of AI) allows machines to "learn" from data patterns and improve over time without explicit programming.
Real-world use: Recommendation algorithms (Netflix, Spotify), self-driving cars, medical diagnostics.
Why it matters: AI is reshaping the job market, decision-making processes, and even ethical debates around privacy and automation.
2. Quantum Computing
Unlike classical computers that use bits (0s and 1s), quantum computers use qubits which can be both 0 and 1 simultaneously. This allows for solving complex problems much faster than current computers.

Real-world potential: Drug discovery, cryptography, climate modeling.
Why it matters: Quantum computing could outperform today's supercomputers, leading to breakthroughs across science and engineering.
3. Biotechnology
This technology uses biological systems to develop products and solutions, from genetically modified organisms (GMOs) to CRISPR gene editing.
Real-world use: Personalized medicine, vaccine development (like mRNA for COVID-19), biofuels.
Why it matters: Biotechnology is central to addressing challenges in health, food security, and sustainability.
4. Nanotechnology
This is the manipulation of matter at the molecular or atomic level, typically below 100 nanometers.
Real-world use: Cancer treatment, water purification, stronger and lighter materials.
Why it matters: Nanotech is creating materials and devices with unprecedented properties and applications.
5. Blockchain and Decentralized Systems
Blockchain is a distributed ledger technology that ensures transparency and security in transactions.
Real-world use: Cryptocurrencies (like Bitcoin), smart contracts, supply chain management.
Why it matters: Blockchain challenges traditional systems of trust and control, offering decentralized solutions across industries.
The Impact on Society
Advanced technology brings many benefits—but also new challenges:
Job Displacement vs. Job Creation: Automation can reduce some jobs while creating demand for new roles.
Privacy and Ethics: Who controls the data? How do we prevent misuse?
Digital Divide: Not everyone has equal access to advanced tech, deepening social inequality.
How Students Can Prepare
Stay Informed: Follow tech news, research journals, and podcasts.
Learn the Basics: Even non-tech majors can benefit from courses in data science, AI, or cybersecurity.
Get Hands-On: Participate in hackathons, internships, or research projects.

Sanjay Sharnangat
Software Engineer, Infosys
Parent of student,
Ms. Amruta Sharnangat

Cloud Computing and its Opportunities in Coming Days

Cloud computing has emerged as a foundational technology in the modern digital landscape, revolutionizing the way data is stored, processed, and accessed. It allows individuals and organizations to use computing resources—such as servers, storage, databases, networking, and software—over the internet on a pay-as-you-go basis. This shift from traditional on-premise infrastructure to cloud-based solutions offers unprecedented scalability, cost-efficiency, and flexibility.

In India, cloud adoption is growing rapidly, driven by the expanding digital economy, government digital initiatives, and the rise of startups and small businesses seeking agile IT solutions. Public and private sector organizations alike are embracing cloud platforms to enhance productivity, improve customer experience, and drive innovation. Leading providers such as Amazon Web Services (AWS), Microsoft Azure, and Google Cloud are expanding their presence and infrastructure in India.

The opportunities in cloud computing are vast and varied. For businesses, it means access to advanced analytics, artificial intelligence, machine learning, and Internet of Things (IoT) capabilities without the need for heavy upfront investment. For government services, it enables efficient digital delivery of schemes, secure data storage, and improved transparency.

From a career perspective, cloud computing is creating a surge in demand for skilled professionals. Roles such as cloud architects, cloud engineers, DevOps specialists, and cybersecurity experts are among the most sought after in today's job market. Educational institutions are also incorporating cloud technologies into their curriculum to prepare students for the future workforce.

Furthermore, hybrid and multi-cloud strategies are gaining popularity, providing organizations the flexibility to use multiple cloud platforms to meet different business needs. This evolution presents opportunities for innovation, research, and entrepreneurship in cloud-native development and service integration.

In conclusion, cloud computing is not just a technological trend but a key enabler of digital transformation. Its continued growth will open up new possibilities across industries, making it essential for students, professionals, and businesses to understand and harness its potential. As India moves towards a digitally empowered society, cloud computing will play a pivotal role in shaping a smarter, more connected future.

Gururaja Kulkarni
ESD Program Lead,
RPG Foundation, Pune

IoT Workflows Scheduling in Cloud-Edge Continuum

Abstract

The growing complexity of big data applications has shifted architectures from monolithic designs to workflows of decoupled analytical processes. In IoT, stream workflows integrate multiple components for real-time decision-making, where performance is affected by network bandwidth and upstream processing rates. Executing such workflows in heterogeneous edge-cloud environments requires advanced scheduling to meet latency, cost, and performance constraints. This work proposes a greedy scheduling and resource allocation algorithm that prioritizes edge execution to reduce latency and data transfer costs, incorporating data locality to minimize network delays. A global search method identifies near-optimal mappings of services to resources. Experiments on a smart warehouse management scenario demonstrate significant latency reduction and cost savings compared to existing scheduling policies, highlighting the method's effectiveness for real-time IoT workflows.

Introduction

IoT generates massive, continuous data streams requiring low-latency processing. While cloud computing offers high computational capacity, it introduces latency due to physical distance from data sources. Edge computing mitigates this by processing data closer to the source, enabling real-time analysis for applications such as autonomous vehicles, industrial automation, and smart warehouses.

Edge resources, however, are heterogeneous and resource-constrained, necessitating efficient scheduling strategies that balance edge and cloud utilization. The challenge is to dynamically allocate tasks to minimize latency and cost while ensuring reliability. This research addresses efficient execution of stream workflows by proposing a scheduling algorithm that intelligently distributes IoT workloads across edge and cloud layers, optimizing performance and scalability.

Proposed Aim

Design and implement an algorithm to schedule IoT real-time workflows across edge and cloud resources, reducing latency, minimizing costs, and meeting user performance requirements while limiting cloud usage.

Motivation

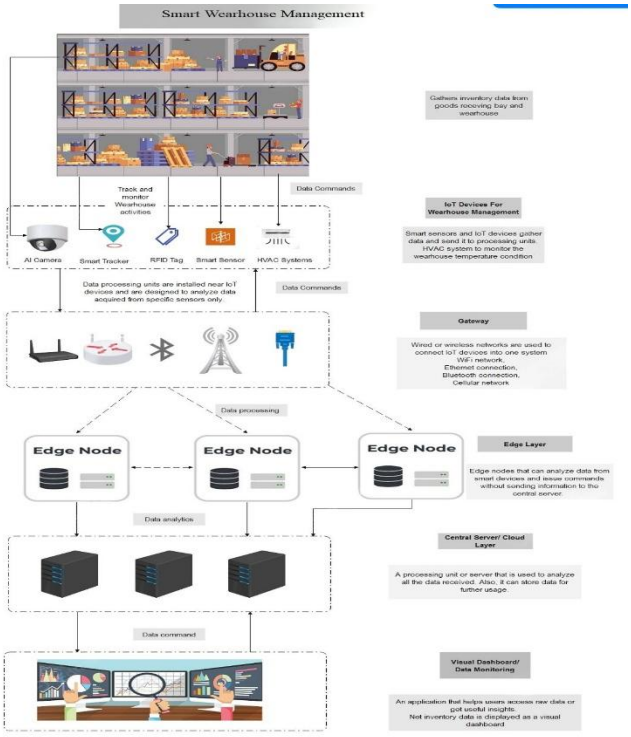


Figure. 1 Smart Warehouse Management System Use Case

Figure 1 illustrates a Smart Warehouse Management system leveraging IoT (Internet of Things) technology. A smart warehouse system uses IoT devices—AI cameras, RFID tags, smart sensors, and

HVAC systems—for real-time monitoring, inventory control, and environmental regulation. Local edge nodes perform initial analytics and control commands, reducing cloud dependency and improving responsiveness. Processed data is aggregated in the cloud for large-scale analysis and visualization. This scenario illustrates the need for an efficient scheduling mechanism to balance local processing and cloud analytics.

Proposed Algorithm

The greedy scheduling algorithm:

- *Prioritizes edge execution for latency-sensitive tasks.*
- *Considers data locality to reduce transfer delays.*
- *Uses a global search to explore near-optimal service-to-resource mappings.*
- *Balances load across heterogeneous resources to prevent bottlenecks.*

Results

Tests on the smart warehouse workflow show:

- *Significant latency reduction vs. baseline scheduling policies.*
- *Notable cost savings by minimizing cloud use.*
- *Robust performance across varied workflows and resource configurations.*

Conclusion

The proposed greedy algorithm efficiently schedules stream workflows in edge-cloud environments, balancing latency reduction, cost optimization, and resource utilization. Its adaptability to different workflows and infrastructures makes it suitable for diverse IoT applications. Future integration with machine learning can further enhance adaptability and multi-objective optimization.

Limitations

- *Limited responsiveness to highly dynamic workloads.*
- *Network condition variations not fully modeled.*
- *Tested on moderate-scale scenarios; large-scale environments require further evaluation.*

Future Work

- *Integrate machine learning for predictive scheduling.*
- *Extend to multi-objective optimization frameworks.*
- *Validate in large-scale, heterogeneous deployments with varied constraints.*

Snehal Sahadeo Deshmukh
Newcastle University, Newcastle, United Kingdom
Alumna
Year - 2019-20

Faculty Achievements

Prof. (Dr.) Pradeep V. Jadhav

Principal

1. Award for Student Engagement and Digital Innovation
   Principal Prof. Dr. Pradeep Jadhav was honored at the 9th Academic Leadership Summit and Awards in New Delhi on 21st February 2025 for his outstanding work in student engagement and digital innovation, recognizing his success in advancing digital learning, student participation, and academic excellence through technology-driven, student-centered teaching.

2. Advocacy for Academia–Industry Collaboration
   At the SheInspires Hackathon 2025 held at Zensar, Kharadi, on 21st March 2025, Principal Prof. Dr. Pradeep V. Jadhav called for stronger links between academia and industry to equip students with real-world problem-solving skills, emphasizing equal opportunities, guidance, and support for women engineers.

3. International Outreach through Korea Edu Tour Roadshow
   Guided by Principal Prof. Dr. Pradeep V. Jadhav, the college participated in the Korea Edu Tour Roadshow at Hyatt Regency, Pune, engaging in discussions on academic partnerships, student exchanges, and global networking to strengthen international collaboration between India and South Korea.

4. Principal of the Year Award at HEIT Summit 2025
   On 15th May 2025, Principal Prof. Dr. Pradeep Jadhav received the Principal of the Year Award for Institutional Excellence at the 8th HEIT Summit and Awards in Pune, honouring his visionary leadership and commitment to academic quality, innovation, and institutional growth.

Department of Engineering Sciences and Allied Engineering

Prof. (Dr.) Avinash M. Pawar

Design Patent Granted on **"**Innovative Battery Cooling Device with Low Diverting Discs" (Design No. 454100-001, Registered on 03-04-2025)

Dr. Milind A. Patwardhan

1. Successfully completed Ph.D. on title "A Research on Comparative Study of High-Temperature Superconducting Magnetic Energy Storage System (SMES) Devices for Smart Grid Applications", under the guidance of Dr. Vivek Yadav, from Sunrise University Alwar.

2. A design patent published on "AI based device for HR operations" on 7th February 2025 (Application No. 442488-001).

Dr. Smita S. Jadhav

A design patent published on "AI based predictive analytics of complex data sets in diagnosis of critical lung cancer in clinical traits" on 2nd May 2025 (Application No. 202541033428).

Dr. Maharudra K. Kapase

Successfully completed Ph.D. on title "A Critical Study of Major Themes in Kazuo Ishiguru's Select Novels", under the guidance of Dr. S. T. Haibatpure, from Swami Ramanand Teerth Marathwada University.

Department of Information Technology

Dr. Ketaki Malgi

The Department of Information Technology is proud to share that Dr. Ketaki Malgi has been selected as a Mentor for the prestigious National Entrepreneurship Challenge (NEC) 2025, organised by E-Cell, IIT Bombay.
This recognition highlights Dr. Malgi's commitment to foster innovation and entrepreneurship among young minds. As a mentor, she will guide and support NEC teams, helping them navigate challenges and contribute to their growth throughout the competition. Her valuable insights, academic expertise, and leadership will play a vital role in shaping the participants' learning journey and success in this national-level initiative.

Students' Achievements

Department of Engineering Sciences and Allied Engineering

Sr. No.	Name of the Students Received Scholarship	Name of the Scholarship Received	Award (Item/Amount in Rs.)
1.	SHRADDHA NIRMAL	IEEE WIE	Laptop
2.	SHRADDHA RAMKISHAN NIRMAL	IEEE WIE	Laptop
3.	AKSHATA SANTOSH LALA	Katalyst	50,000/-
4.	BHAKTI VIJAY WARGHUDE	Katalyst	50,000/-
5.	BHAKTI VIJAY WARGHUDE	Katalyst	50,000/-
6.	DIKSHA BAPUSAHEB CHAVAN	Katalyst	50,000/-
7.	DNYANESHWARI SUNIL KHENAT	Katalyst	50,000/-
8.	DNYANESHWARI SUNIL KHENAT	Katalyst	50,000/-
9.	JANVHI RAJU HUGAR	Katalyst	50,000/-
10.	KHUSHI KAILAS DODE	Katalyst	50,000/-
11.	NIKITA JAKAPPA PUJARI	Katalyst	50,000/-
12.	PRATIKSHA BALASAHEB KINKAR	Katalyst	50,000/-
13.	SAKSHI VIJAY KHENGARE	Katalyst	50,000/-
14.	SAKSHI VIJAY KHENGARE	Katalyst	50,000/-
15.	SONALI SUNILKUMAR KAPURE	Katalyst	50,000/-
16.	SRUSHTI ARUN KADAM	Katalyst	50,000/-
17.	VAISHNAVI SHANKAR VITKAR	Katalyst	50,000/-
18.	PRIYANKA DHANANJAY ANBHULE	Katalyst	50,000/-
19.	SAMRUDDHI SANJAY POTEKAR	Katalyst	50,000/-
20.	PRIYANKA DHANANJAY ANBHULE	Lila Poonawalla	50,000/-
21.	AKSHATA SANTOSH LALA	Lila Poonawalla	60,000/-
22.	ARPITA KAUTIK PATIL	Lila Poonawalla	70,000/-

23.	CHETANA VINOD SHENAI	Lila Poonawalla	50,000/-
24.	GAURI CHILWANT	Lila Poonawalla	62,000/-
25.	GAYATRI KANTILAL KHADE	Lila Poonawalla	70,000/-
26.	KOKARE APEKSHA PINUKDEV	Lila Poonawalla	70,000/-
27.	NIVEDITA JHA	Lila Poonawalla	70,000/-
28.	PRATIKSHA BALASAHEB KINKAR	Lila Poonawalla	70,000/-
29.	PURVA VISHNU UPADHYAY	Lila Poonawalla	50,000/-
30.	RUCHA SHANKAR DESAI	Lila Poonawalla	50,000/-
31.	SANIKA BANDU KARDULE	Lila Poonawalla	70,000/-
32.	SANIKA BANDU KARDULE	Lila Poonawalla	70,000/-
33.	SAYYED ADIBA BASHIR	Lila Poonawalla	70,000/-
34.	SHAGUN BHARAT BAWANKAR	Lila Poonawalla	70,000/-
35.	SHARWARI YOGESH CHAVAN	Lila Poonawalla	70,000/-
36.	SIDDHI LAXMAN AGALE	Lila Poonawalla	70,000/-
37.	VASUNDHARA AVADHUT PATIL	Lila Poonawalla	70,000/-
38.	VEDIKA HEMANT PHATAK	Lila Poonawalla	35,000/-
39.	SAMRUDDHI SANJAY POTEKAR	Lila Poonawalla	70,000/-

Selected as Campus Ambassador Intern at IIT Bombay E-Cell

Safa Quadri

Selected as Campus Ambassador Intern at IIT Bombay E-Cell

Mitali Joshi

Name of Student	Class	Staff Name/ Guide	Name of Activity	Recognition/ Award	Organized By
Manasvi Pudale Shruti Deshmukh Svarupa Kadam Shruti Waghmare	BE	Prof. P. S.Raikar	Bhartiyam paper presentation	Second Prize	Bharati Vidyapeeth (Deemed to be University) College of Engineering Pune.
Shreya Dhadse Janhavi Sharma	BE TE	-	SheInspires Women's Hackathon	First Runner Up	Zensar, RPG foundation, AWS
Prachi Kasliwal Nandini Pandey Deepshika sharma Mehar kaur Gandhi	SE	-	Pitchforge Start up Idea Competition	Second Prize	Bharati Vidyapeeth's College of Engineering for Women, Pune
Bhagyashree Ravindra Mistari Neha Ajay Chandele	SE	-	Web Fusion Website Development Competition	Second Prize	Dr. D. Y. Patil Institute of Technology Pimpri, Pune-18

Placements from January 2025 to May 2025

Sr. No.	Name of the Student	Company
1	Vaishnavi Waykaskar	Infosys
2	Arya Kesharwani	Infosys
3	Pratiksha Taral	Infosys
4	Reshma Markad	Western Union
5	Sambodhi Kamble	VOIS
6	Gayatri Mahabudhe	VOIS
7	Shreeya Kulkarni	VOIS
8	Shriya Lakhe	Cognizant
9	Tanuja Misal	Cognizant
10	Shreya Pol	Digital Parker
11	Shruti Sandeep Waghmare	Redhat
12	Radhika Bhoite	Intellipaat Software Solutions Pvt Ltd

Our Esteemed Recruiters

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