# Yashwantrao Bhonsale Institute of Technology

**Computer Engineering Department** 

Vol: XII page I fvishkar April 2025



Dear Avishkar Readers,

It gives me immense pleasure to connect with you through this edition of Avishkar. Our commitment to holistic education is reflected in the achievements of our students and faculty, who continuously push boundaries the knowledge and technology. This edition highlights remarkable initiatives, research endeavors, and events that shape our academic journey. I encourage everyone embrace new challenges, collaborate, contribute and towards a brighter future.

**Happy Reading!** 



Editor in Chief Mr. G. A. Bhosale (Vice Principal)

Co-Ordinator Mrs. N. N. Sandye (Lecturer)

**Departmental Faculty Member** Mr. T.C. Mhapankar (Lecturer)

**Departmental Student Member** Ms. S. A. Shaikh (Student TY B)

### OUR VISION

To Produce **Ethical and Knowledgeable** Diploma Holders in Computer Engineering

#### "Students Spark Innovation with Trailblazing Projects This Academic Year!"

In the current academic year, our third-year Computer Engineering diploma students have truly raised the bar by developing a range of innovative projects like Smart Robots, Smart Spray Systems, Rechargeable Meters, Smart Trolleys, the visionary "One Card One Nation" concept, and advanced Disaster Management Systems.

With the constant support and guidance of dedicated faculty members, our students have not only worked tirelessly but also earned accolades and prizes across various platforms. Their creativity, teamwork, and dedication have brought immense pride to our institution.

We are beyond proud of their achievements the future is in safe, smart hands!



### **(OUR MISSION)**

To provide students with curriculum and industry based teaching learning process.

#### Mission 02

To encourage faculty and students to participate in industry academic events.

#### Mission 03

To provide social platform that generate ethical and entrepreneurship skill in students.

#### VICE-PRINCIPAL'S DESK Mr.G.A.Bhosale



Dear Avishkar Readers,

It is a pleasure to share our institute's progress and achievements through this edition of Avishkar. At YBIT, we are committed to nurturing talent, fostering innovation, and equipping our students with the skills needed for the technological ever-evolving landscape.

This newsletter reflects the dedication of our students and faculty in academics, research, and co-curricular activities. Let us continue to strive for excellence and make the most of the opportunities that come our way.

As we continue to embrace new technologies and teaching methodologies, I encourage all students to engage actively in various opportunities available to them. Together, let us strive for greater heights in our pursuit of academic excellence.

All the Best!



Yashwantrao Bhonsale

### **GUEST LECTURES & ACTIVITIES**

#### >>> WEB DEVELOPMENT SESSION

The Computer Engineering Department (Diploma Wing) conducted an expert lecture on Web Application Development Using Java Swing and JDBC API, delivered by Prof. Prakash N. Talankar from Sant Rawool Maharaj College, Kudal. He explained Java Swing components, event handling, JDBC connectivity, and CRUD operations in a clear and simple manner. The session covered the complete development process including GUI design, database connection, error handling, and data validation. A total of 108 students and all department staff attended. The event concluded with a vote of thanks by Ms. S. S. Kolapate.





#### >>> INVESTOR AWARENESS PROGRAM

Yashwantrao Bhonsale Institute **Technology** and SEBI organized an expert lecture on Investor **Awareness** TY Computer (Div A) students on 16th October 2024. Mr. Jambhalikar and Mr. **Jadhav** spoke on investment importance and SEBI's role. The session was interactive and attended by 60 students. It was coordinated by Mr. S. M. Mayekar, Mr. R. C. Dhandekar, and HOD Mr. P. D. Kate.

#### >>> PARENT-TEACHER MEET

On 19th October, the Computer **Engineering Department (Diploma** Wing) held a Parent-Teacher Meet for SY and TY students to discuss academic progress. The session began with a tribute to Mr. Ratan Tata. followed by student felicitation. HOD Mr. P. D. Kate shared departmental updates, and TPO Head Mr. M. R. Desai spoke on career opportunities. Vice Principal Mr. G. A. Bhosale addressed academic guidance, and parents shared positive feedback. The meet with concluded mentor-parent interactions.





#### >>> YBIT FACULTY SHINES IN TRAINING PROGRAM

Mr. A.S.Padwal Lecturer, Computer Department, Yashwantrao **Bhonsale** Institute of **Technology** (Diploma Wing), has successfully completed the Faculty **Development** and Training Program (FDTP) on "Programming in Python." The offline program was organized by L&T Skill Trainers Academy, Madh Jetty, Mumbai, sponsored by MSBTE and L&T from 9th to 13th December.



### >>> FACULTY DEVELOPMENT PROGRAM ON AI/ML

Yashwantrao Bhonsale Institute of Technology's Computer Department (Diploma Wing) conducted a two-day Faculty Development Program on AI and Machine Learning from 4th to 5th December 2024, with 65 faculty members from Maharashtra. The event was inaugurated by Dr. Raman Bane, Mr. G. A. Bhosale, and Mr. P. D. Kate. Expert trainers Mr. Shivam Banne and Mr. Amit Halasure from Softmusk Pvt. Ltd. led the sessions. The program concluded with a Valedictory Function, where dignitaries expressed their gratitude and support.

Yashwantrao Bhonsale
Institute of Technology



Mr.P.D.Kate

**HOD'S DESK** 

### **INDUSTRIAL DROP-INS**

### > INDUSTRICAL VISIT - INET SOLUTIONS

On 22nd January 2025, the Computer Engineering Department arranged an industrial visit for Second Year Computer Engineering students to I Net Solutions, Sawantwadi. Students learned about data transfer software, networking devices, and cables. The visit aimed to enhance their understanding of computer technology and data communication. The session was guided by Mr. Ganesh Naik and Mr. Amey, with 134 students and faculty members, including HOD Mr. P. D. Kate, attending the visit.







#### Dear Avishkar Readers, It is a privilege to connect with

you through this edition of Avishkar. The Department of Computer Engineering at YBIT remains dedicated to academic excellence, innovation, and industry-oriented learning. Our students and faculty continue achieve remarkable milestones in research. and projects, technical advancements. This newsletter captures the essence of our collective efforts, highlighting key initiatives, workshops, and achievements. Let us stay motivated. embrace challenges, and work towards a future driven by knowledge and technology.

In this issue, we highlight the achievements of our students and faculty, reflecting our dedication to academic excellence and research. I encourage everyone to explore the articles and updates that our vibrant celebrate community and its contributions to the field of technology. Thank you .





# wipro

### INDUSTRICAL VISIT - WALSTAR IT INDUSTRY



The Third Year Computer Engineering Diploma students of Yashwantrao Bhonsale Institute of Technology organized an industrial visit to WalStar IT Industry, Kolhapur. The visit began with a warm welcome and a fun registration activity, where winners received gifts. Ms. Sneha, HR Representative, facilitated the visit, allowing students to explore the workings of the IT company. Experts conducted informative sessions on Full Stack Development, providing live demos and exposing students to the latest technologies, enhancing their practical understanding.

Current final Year student's Got Selected at industries





### **ISTE APPROVED SELF-FINANCED**

### STATE-LEVEL PROJECT COMPETITION

### >>> TECHXELLENCE 2K25













Yashwantrao Bhonsale Institute of Technology (YBIT) hosted the ISTE Approved Self-Financed State-Level Project Competition, TECHXELLENCE 2K25, on 29th March 2025. The event provided a platform for students to present innovative projects in fields like IoT, AI, robotics, and smart systems. Inaugurated by Mrs. Sunetra Phatak, Principal Dr. R. R. Bane, and Vice-Principal Mr. G. A. Bhosale, the competition encouraged students to explore their creativity and technical skills beyond academics.

The competition attracted participants from institutions like Government Polytechnic Ratnagiri, KPIT Mudal, and YBIT. Projects were evaluated by jury members Mr. Manoj S. Khadilkar and Mr. Aditya Masurkar based on innovation, feasibility, and technical execution. The event showcased students' technical abilities and emphasized the importance of innovation in addressing real-world challenges.



#### Team Members

Naik Sakshi Rane Sanmesh Manjarekar Sakshi Zore Raghu

The winning project, Smart Spray Robo Using IoT, demonstrated a highly efficient and automated spraying system designed for precision agriculture, ensuring optimized water and pesticide usage with minimal human intervention.



#### Team Members

Shirodkar Pallavi Sawant Kaustubh Keravadekar Prathamesh Sawant Nupur Manjalkar Ganesh

One Card One Nation, proposed an innovative universal identification and transaction card, aiming to integrate multiple essential services into a single, smart, and secure system.



### **ALUMNI INTERACTION**

#### >>> INSPIRING JOURNEYS, LASTING IMPACT



On 21st March 2025, the Computer **Department** (Diploma Wing) Yashwantrao Bhonsale Institute of Technology, Sawantwadi, organized an alumni interaction session featuring Mr. Bhaskar Dhuri, a 2021-22 batch alumnus. He shared valuable guidance on degree admissions, campus placements, aptitude preparation, and platforms like GitHub and PrepInsta. Mr. Dhuri also emphasized dedication and adaptability for career success. The session saw active student participation and concluded with a vote of thanks by Mr. S. M. Mayekar. HOD Mr. P. D. Kate highlighted Mr. Dhuri's journey as a reflection of the institute's quality education.





#### >>> FROM CAMPUS TO CAREER



On 18th March 2025, Yashwantrao **Bhonsale** Institute of Technology, Sawantwadi. organized an alumni third-year interaction session for students featuring 2022-23 graduates Mr. Mihir Sawant and Ms. Shweta Sawant. They shared their professional emphasized experiences and importance of perseverance, adaptability, and hard work. The session saw active student participation, with discussions on career development and growth. HOD Mr. P. D. Kate appreciated the alumni's contributions, highlighting their success as a reflection of the institute's educational values. session concluded with a vote of thanks by Mr. T. C. Mhapankar.

### **ACHIEVEMENTS**

**APR 04, 2025** 











Students from the Diploma Computer Department of Bhosale Institute of Technology achieved remarkable success at the national-level technical competition "Virtuosic", organized by SSPM College of Engineering, Kankavli.

The project "Semi Humanoid Bot with Integrated AI" by Atharva Narvekar, Lav Parab, Saish Thakar, and Mitesh Ghadi won First Prize, under the guidance of Lecturer Mr. Ravi Dhandekar.

The Second Prize was jointly awarded to two teams:

"One Card One Nation" by Prathamesh Kerwadekar and Ganesh Majalkar (guided by Mr. Jagannath Gawade), and

"Smart Care Robot" by Mahadev Kamble, Manav Agarwal, and Aman Nevgie (guided by HOD Mr. P. D. Kate).

The Third Prize went to the project "Smart Spray Robo Using IoT" by Raghu Zore, Parth Parab, and Shruti Chauhan, under the guidance of Mr. Suraj Sawant.

Hon. Chairman Mr. Achyut Sawant-Bhonsale, Principal Dr. Raman Bane, and Vice-Principal Mr. Gajanan Bhosale congratulated the students and their mentors for this outstanding achievement.



### **ACADEMIC TOPPER WINTER 2024**



### THIRD YEAR COMPUTER

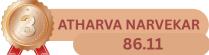












### **Division A**

















### **ACADEMIC TOPPER WINTER 2024**



#### **SECOND YEAR COMPUTER**







**Division A** 



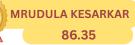




**Division B** 

#### **FIRST YEAR COMPUTER**













### **STUDENTS CORNER**



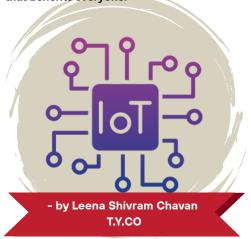
## My Perspective on the Internet of Things (IoT)

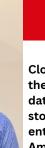
The Internet of Things (IoT) is not just a technological advancement but a revolution that is reshaping the way we interact with the world around us. As I consider this interconnected web of devices, sensors, and systems, I realize that IoT is more than just

smart gadgets; it represents a shift in how we perceive connectivity, automation, and data-driven decision-making. The rapid expansion of IoT has created opportunities that seemed unimaginable just a few decades ago, yet it also raises critical questions about security, privacy, and ethical use.

With billions of devices communicating in real time, I am concerned about the vulnerabilities that come with such an interconnected world. Data breaches, cyberattacks, and unauthorized surveillance are real risks that cannot be ignored. While IoT has the potential to enhance convenience and efficiency, I believe that strong policies and responsible implementation must be at the core of its development. My perspective on IoT has led me to recognize the need for a balanced approach—one that embraces innovation while ensuring security,

transparency, and user control. The future of IoT lies in our ability to design systems that empower individuals and businesses without compromising fundamental human rights. As we continue to integrate IoT into our daily lives, I believe collaboration among technologists, policymakers, and society as a whole will be crucial in shaping an ecosystem that benefits everyone.





# The Evolution of Cloud Computing

Cloud computing has revolutionized the way we store, access, and manage data in the digital era. From personal storage solutions like Google Drive to enterprise-level services such as Amazon Web Services (AWS) and Microsoft Azure, cloud computing has

become an essential part of modern technology. The ability to access information from anywhere, collaborate in real time, and scale resources efficiently has made cloud computing an indispensable tool for businesses, researchers, and individuals alike. However, as we embrace the convenience of the cloud, we

must also be aware of the challenges it presents, such as data security, privacy concerns, and dependency on internet connectivity. One of the most pressing concerns is data protection. With cyber threats evolving rapidly, organizations must invest in robust security measures like encryption, multifactor authentication, and regular security audits. Additionally, ethical considerations arise regarding data ownership—who truly controls the data stored in the cloud, and how can users ensure their privacy rights are upheld? Despite these concerns, cloud computing continues to grow, driving innovation in fields like artificial intelligence, big data analytics, and remote work solutions.

The future of cloud technology lies in enhancing security, reducing latency through edge computing, and making cloud services more energy-efficient. As we navigate this everchanging digital landscape, it is crucial to strike a balance between innovation and security. By staying informed and adopting best practices, we can harness the full potential of cloud computing while safeguarding our digital assets.





### **STUDENTS CORNER**



#### The Evolution of **Edge Computing**

The Internet of Things (IoT) has transformed Despite data processing, with billions of connected computing faces challenges such as generating devices vast amounts information. While cloud computing has been the primary method for handling this data, it presents challenges such as high latency, bandwidth limitations, and security risks. Edge

computing addresses these issues by processing data closer to its source, reducing delays and improving efficiency. One of the key benefits of edge computing is reduced latency. In applications like autonomous vehicles and industrial automation, real-time decisionmaking is crucial. By processing data locally, edge computing enables faster responses without relying on distant cloud servers. Additionally, it optimizes bandwidth usage by filtering and transmitting only essential data, reducing network congestion and storage costs.

Edge computing also enhances system reliability, especially in remote locations with unstable internet connectivity. For instance, in precision agriculture, IoT sensors can analyze soil conditions locally, ensuring continuous operation even when cloud access is unavailable. Furthermore, edge computing improves security by keeping sensitive, data closer to its source, minimizing the risk of cyber threats.

its advantages, limited processing power on edge devices and the complexity of managing distributed However, as technology advances, its adoption is expected to grow, shaping the future of IoT with smarter, more efficient systems.



- by Tanmay Vasudev Parab T.Y.CO



# My perspective on Cryptojacking

Cryptojacking is a serious cyber threat that I believe that securing our digital many people may not even realize is space is a shared responsibility. As happening. It is a type of online attack where technology keeps advancing, we must hackers secretly use someone's computer, also improve our awareness and phone, or other devices to mine

cryptocurrency without permission. This happens without the user knowing, and it can slow down devices, increase electricity bills, and even damage hardware over time. As I think about cryptojacking, I see it as more than just an issue of stolen computing power. It raises important concerns about online security and privacy. If hackers can take control of our devices without us noticing, what else could they

do? This makes me realize how important it is to stay alert and protect our digital world. To prevent cryptojacking, we need better cybersecurity systems, stronger awareness, and responsible internet use. Installing antivirus software, keeping devices updated, and avoiding suspicious websites or downloads are some simple steps everyone can take. At the same time, companies and cybersecurity experts must work together to create better protections.

defenses against cyber threats like cryptojacking. Only by together can we ensure a safer and more trustworthy online world.



- by Chaitanya Sanjay Gosavi T.Y.CO



### **EDUCATOR'S INSIGHT**

In today's fast-paced digital world, a diploma in computer engineering serves as a powerful gateway to a successful career in IT. This program masterfully blends technical expertise with managerial acumen, equipping students with the essential skills to innovate, lead, and excel in diverse professional roles.

Mastering programming languages like Python, Java, and C++ lays the foundation for cutting-edge software development, automation, and artificial intelligence. Web technologies such as HTML, CSS, and JavaScript empower students to design intuitive, high-performing applications, while expertise in database management ensures seamless data handling and security. Key subjects like data structures, operating systems, and computer networks sharpen analytical thinking, enabling students to optimize complex systems. Additionally, digital electronics deepens their understanding of computer hardware, enhancing their versatility in the tech ecosystem. A computer engineering diploma is more than just an academic qualification—it is a launchpad for success in the ever-evolving IT industry. In an industry that thrives on continuous learning and adaptability, this diploma provides the perfect stepping stone toward an exciting and rewarding future.



Prof. Mr. J.A.Gawade Lecturer

### **TECH TINKER'S CORNER**



Mr. P. P. Pokhare
Lab Technician

**Building Network Bridges for Tomorrow:** 

In today's interconnected world, the ability to build and maintain strong networks is becoming increasingly vital. We've been discussing in class how networking isn't just about collecting contacts, but about cultivating genuine relationships.

For our students, this means learning how to effectively communicate, collaborate, and connect with others. We've been practicing these skills. The future job market will value those who can leverage their networks to solve problems, share ideas, and create opportunities. Encourage your child to participate in extracurricular activities, join clubs, and engage in community events. These experiences provide valuable opportunities to develop their networking skills.

Remember, networking is a lifelong skill. By fostering these abilities early on, we are preparing our students for success in a dynamic and interconnected world. Let's work together to help them build bridges to their future!

#### **ALUMNI SPOTLIGHT**

Reflecting on my experience at Yashwantrao Bhonsale Polytechnic, Sawantwadi, I am deeply thankful for the experiences that formed me. Studying for a diploma in Computer Engineering was a life-altering experience, which gave me a solid technical grounding and experiential learning. The institution's wonderful campus and nurturing atmosphere challenged me to venture beyond textbooks, engage in technical activities, and work on projects that reinforced my knowledge of industry applications.

The mentorship by committed faculty members not only strengthened my technical proficiency but also endowed me with problem-solving skills and teamwork. Highly equipped laboratories, interactive classes, and collaborative learning made each day worth it. Outside the class, the bonds and collaboration that I formed here contributed significantly to my professional and personal development.

I am honored to be a graduate of Yashwantrao Bhonsale Polytechnic and will forever hold dear the experiences gained. To present students, maximize every moment, remain curious, and continue learning!

- Bhaskar Dhuri





"Looking back at my journey with Yashwantrao Bhonsale Polytechnic, Sawantwadi, I am filled with immense gratitude. Pursuing my diploma in Electronics and Telecommunication laid the foundation for my professional aspirations. The hands-on exposure to practical sessions, workshops, and industry visits enriched my understanding and gave me a strong sense of direction.

Beyond academics, what truly made the difference was the culture of encouragement and innovation. The faculty didn't just teach—they inspired. Their guidance gave me confidence to step into the world with curiosity and resilience. I still recall late-night project discussions, tech fests, and those small wins that helped shape my confidence.

What I learned here continues to guide me even today: discipline, passion for technology, and the importance of collaboration. To all the budding engineers—believe in your journey, stay proactive, and make the most of every opportunity this wonderful institution offers."

- Shruti Pednekar

#### **FAREWELL**



On this occasion, the dignitaries present on the stage included the Executive President of the institute Achyut Sawantbhosale, Head of Electrical Department Harshal Pawar, Head of Computer Department Prashant Kate, Head of Civil Department Prasad Sawant, Head of Mechanical Department Abhishek Rane, and Mahesh Patil.

While giving his best wishes, Achyut Sawantbhosale urged the students to make full use of the technical skills learned in college in their future lives. He also expressed confidence that values and discipline will take them to great heights in life. Department heads also conveyed their best wishes and assured the students that the institute would always stand by them at every stage of their career.

Many students shared their thoughts on the occasion, recounting their experiences over the past three years at the college. Some students became emotional. After the program, a farewell lunch was served to all the students. The

event was hosted by Amar Prabhu.

### FROM THE STUDENT MEMBER



As I pen down this message, a wave of emotions surrounds me gratitude, pride, and a touch of nostalgia. Being a part of the Avishkar Editorial Committee has been one of the most fulfilling chapters of my academic journey. And now, as a final-year student,

this marks my last editorial contribution to the newsletter that has become so close to my heart.

I extend my sincere thanks to Honorable Faculty Member Mr. T. C. Mhapankar, our respected HOD Mr. P. D. Kate, and Vice Principal Mr. G. A. Bhosale for blessing me with the opportunity to be a part of this creative and inspiring endeavor. Their guidance has helped shape both this newsletter and my personal growth.

From uncovering stories of student excellence to highlighting faculty brilliance, Avishkar has been more than just a publication—it's been a platform of pride, expression, and shared vision. Through this experience, I've grown not only in skill but also in spirit.

I've had the privilege of working alongside some of the most passionate and dedicated minds—faculty and fellow students alike. To all of them, thank you for making this journey meaningful.

As I bid farewell to my editorial role, I do so with a full heart and hopeful eyes. I pass the torch to the next generation of storytellers with great pride.

May Avishkar continue to flourish, capturing every spark of innovation and every heartbeat of our department.

Thank you, Ms.Shirin Anwar Shaikh Student Member, Editorial Committee

### FROM THE FACULTY MEMBER

It is with immense pride that we present this semester's edition of Avishkar, a reflection of the creativity, dedication, and achievements within our Computer Engineering Department.I am sincerely grateful to our Honorable HOD



Mr. P. D. Kate, and our respected Vice Principal, Mr. G. A. Bhosale, for placing their trust in me by giving me the opportunity to serve on the Editorial Committee. Their continuous support, mentorship, and encouragement have been instrumental throughout the process.

This edition would not have been possible without the exceptional contribution of Ms. Shirin Shaikh, whose dedication and sharp editorial insight ensured the newsletter meets the highest standards. Her commitment to bringing out the best in every page has truly elevated this volume.

We are also especially thankful to Mr. A. S. Padwal, our cofaculty member, whose creative inputs and technical finesse added a special touch to this edition. His unique contributions brought a fresh visual and structural appeal to Avishkar.

To our brilliant students—your ideas, energy, and determination are what breathe life into this newsletter. Whether it's through your projects, achievements, or initiatives, you continue to inspire us all. Keep exploring, keep pushing boundaries, and never stop being curious. Avishkar is more than a publication—it's a platform, a

Avishkar is more than a publication—it's a platform, a voice, and a mirror of who we are as a department. Let's continue to grow together, one edition at a time.

Thank you, Mr.Tejas Chandrakant Mhapankar Faculty Member, Editorial Committee

