



Bapuji Educational Association (Regd.)  
**Bapuji Institute of Engineering and Technology, Davangere-04**  
(Affiliated to VTU Belagavi, Approved by AICTE, New Delhi)  
Accredited by the NAAC with A Grade



# INFO VOICE

Department of Information Science and Engineering

Volume-6

August 2022 - July 2023



*“Education is the most powerful weapon you can use to change the world”*

*-B.B. King*

## **Vision of the Institute**

“To be **center of excellence** recognized **nationally** and **internationally**, in distinctive areas of **engineering education** and **research**, based on a culture of **innovation** and **invention**.”

## **Mission of the Institute**

“BIET contributes to the **growth** and **development** of its students by imparting a board based **engineering education** and **empowering** them to be successful in their chosen field by inculcating in them **positive approach**, **leadership qualities** and **ethical values**.”

## **Vision of the Department**

“To be the **center of excellence** by adopting technological **innovation** in **academics** and **research** to develop competent **man power** for emerging needs of **society** and **industries**.”

## **Mission of the Department**

**M1:** To provide **quality education** to meet the challenges of technological changes to succeed in their **professional career** and **higher education**.

**M2:** To inculcate the culture of **research**, **innovation** and **entrepreneur skills** among the students.

**M3:** To groom our students with the quality of **team spirit**, **leadership skills** and **ethical values**, to share and apply their knowledge for the **benefit of the society**.

## **Program Educational Objectives (PEOs):**

**PEO1-** The graduates of program will have **excellence** through **principles** and practices of **Information Technology** combined with **Fundamentals of Engineering**.

**PEO2 -** The graduates of program will be prepared in **diverse areas** of **Information Science** for their **successful careers**, **entrepreneurship** and **higher studies**.

**PEO3 -** The graduates of program will **work effectively** as an **individual** and in a **team**, exhibiting **leadership qualities**, **communication skills** to meet the **goals** of the **organization**.

**PEO4 -** The graduates of program will grove their **profession** with **ethics**, **Management principles** to carry **societal responsibilities**.

## **Program Specific Outcomes (PSOs):**

**PSO1: Problem Solving Skills** - Ability to apply **standard principles** and **practices** of Information Technology to propose **feasible ideas** and **solutions** to computational tasks using **appropriate tools** and **Techniques**.

**PSO2: Knowledge of Information Technology** – **Analyze, Design, Develop** and **Test** the computer based software in the areas related to **Algorithms, Networks, Cloud Computing, Web, Data Science and IoT**.

**PSO3: Profession and Research Ability** – Inculcate the knowledge to **excel** in **IT profession, Entrepreneurship** and **research** with **Ethical standards**.

## **The objectives of the newsletter mainly focus on the:**

- Achievements of the Students and Faculty members from the Department of Information Science and Engineering in Curricular, Co-curricular and Extra-curricular Activities.
- The Recent trends in the area of Information Science & Engineering and related areas.

## **About the Department:**

The department was established in the year 2000 with an intake of 60 students and it is increased to 120 in the year 2007, 150 in the year 2021 and 180 in the year 2022. The department is equipped with all necessary infrastructure and laboratory facilities. Keeping in view of the vision of the department, the department of Information Science is working to achieve excellence in various aspects such as: students' performance, effective teacher-student relationship, imparting quality education to students, motivating faculty and students towards research and imbibing best human qualities in students.

The department has a strong and active Forum INSYNC helping in all-round development of the students through various Technical Workshops on Recent Technologies like Big Data, Cloud Computing, Python, Android, IoT etc. Extensive placement trainings are conducted to improve employability of the students. The faculty of the department is actively involved in research activities in various technical domains.

The department has established Industry 4.0 Center of Excellence in collaboration with Rovelabs, Bengaluru to adapt itself to the rapid advancements in various specialized fields.

## NEWS LETTER COMMITTEE

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### Message from HOD's Desk:

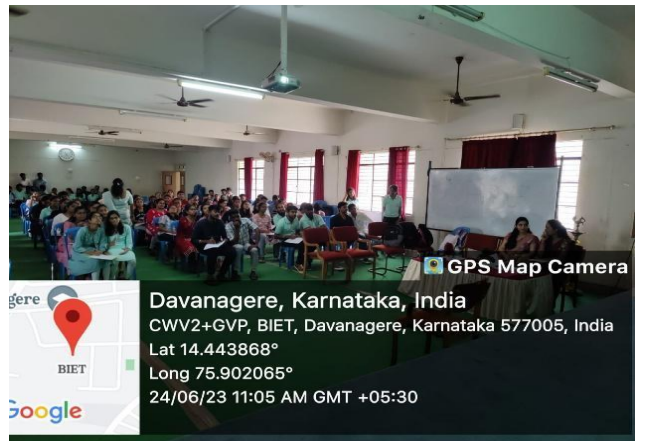
I am happy to note that the Department of Information Science and Engineering is releasing its Newsletter for Academic Year 2022-23 (Volume 6) and enumerating the various activities of our faculty and students. Working towards the overall development of the students, the department is committed to bring the best of the students through this newsletter. Education is more important in our life than learning or being literate. The Newsletter is a good way to learn about developments and activities of the department and to let others know. I congratulate all the people who have been associated with this publication.

**Dr. Poornima B.  
Prof. & Head,  
Dept. of IS&E**

## Activities Conducted in the Department



Computer Awareness Program in association with SS Care Trust was conducted on 20<sup>th</sup> and 21<sup>st</sup> July 2023 for Government School Students.



Branch Fest “Info-Arohana 23” was organized by IS&E department in associated with ISTE, IEI, EEE, IIC and IQAC was conducted during the period of 23<sup>rd</sup> and 24<sup>th</sup> June 2023.



“Hybrid Application Development using Flutter and Dart” A program for students was conducted from 13<sup>th</sup> to 15<sup>th</sup> June 2023 in association with IEEE.



“HackTechFusion” A technical coding competition held on 12<sup>th</sup> June 2023 in association with NAIN, IEEE, ISTE and IEL.



Three Days Workshop on “Android Application Development” was conducted for 6<sup>th</sup> semester Students during the period of 19<sup>th</sup> and 21<sup>th</sup> May 2023 in association with ISTE and IEEE.

**Virtual LECTURE SERIES - 2023**  
 In Association With IEEE Bangalore Section FROM 15<sup>TH</sup> - 19<sup>TH</sup> MAY

- MAY 15: MACHINE LEARNING AND ITS APPLICATIONS**  
 Dr. Manoj Kumar M V, HOD, AI & ML Department, PESITM, Shivamogga
- MAY 16: EXPLORATORY DATA ANALYSIS**  
 Dr. Lakshin Thomas, Asst. Prof., IS & E Department, NMFT, Bangalore
- MAY 17: BIG DATA**  
 Preetham B S, Sr. Asst. Prof., IS & E Department, NMFT, Bangalore
- MAY 18: IOT & CLOUD COMPUTING**  
 Dr. Vishnu Srinivasa Murthy V, Sr. Asst. Prof., Department of Computational Intelligence, VIT University, Tamil nadu
- MAY 19: CYBER SECURITY**  
 Dr. Shiva Darshan S L, Asst. Prof., Department of IT, Manipal University, Bangalore

ORGANISED BY  
 DEPARTMENT OF INFORMATION SCIENCE AND ENGINEERING,  
 BAPU INSTITUTE OF ENGINEERING AND TECHNOLOGY,  
 POST-BOX NO. 322, SHAHARUR ROAD, DAVANAGERE, 577004

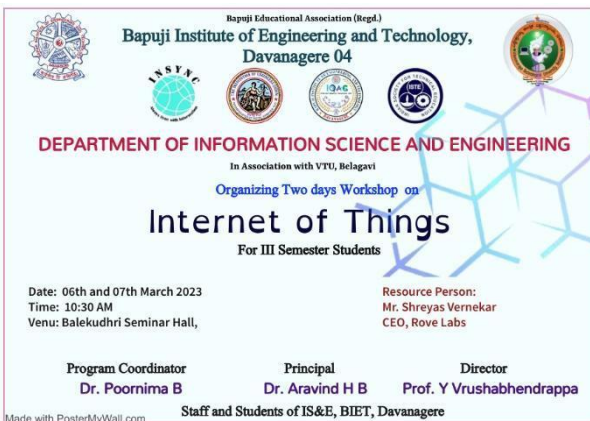
Program Coordinator: Dr. Poornima B | Event Coordinators: Puneeth B H & Puneeth S P



“Virtual Lecture Series” was conducted for 6<sup>th</sup> semester students during the period of 15<sup>th</sup> to 19<sup>th</sup> May 2023 in association with IETE and IEEE.



Women's Day Celebration "Embrace Equity" was conducted on 30<sup>th</sup> March 2023.



Workshop on "Internet of Things" was conducted during the period of 06<sup>th</sup> and 07<sup>th</sup> March 2023 in association with ISTE.



Five Days FDP on "Data Analytics and Data Science" was conducted from 30<sup>th</sup> Jan to 03 Feb 2023 in association with ISTE and IEI.



**Coding Competition Bit's N Bytes** was conducted for students by IS&E Dept. on 13<sup>th</sup> Jan 2023 in association with ISTE.

<p><b>About the Institute</b></p> <p>Bapuji Institute of Engineering and Technology (BIET), is one among the top ten self-financing Engineering Institution in the state of Karnataka, providing high quality education to bring out skilled engineers and technocrats. The greenery campus spread over an area of 53 acres provides the state of art infrastructure and facilities. The Institution is certified with 'A' Grade under NAAC and also has the facility of New Age Incubation Network (NAIN) Centre. The institute provides an ideal ambience for teaching-learning process, co-curricular and extra-curricular activities to achieve excellence in technical education, research and promotion of entrepreneurship. The institute has got recognition by UGC under section 2F of UGC act.</p> <p><b>Objectives of workshop</b></p> <ul style="list-style-type: none"> <li>• Foundation knowledge in database concepts, technology and practice to groom students into well-informed database application developers.</li> <li>• Strong practice in SQL programming through a variety of database problems.</li> <li>• Develop database applications using front-end tools and DBMS in the back end.</li> </ul>	<p><b>Chief Guests :</b></p> <p>Dr. H B Aravind Principal, BIET, Davanagere.</p> <p>Prof. Y. Vrushabhendra Director, BIET, Davanagere.</p> <p><b>Resource Persons:</b></p> <ol style="list-style-type: none"> <li>1. Prof. Madhuri Martis, Asst. Professor, ISE, BIET</li> <li>2. Prof. Nomitha Chawla, Asst. Professor, ISE, BIET</li> </ol> <p><b>Organizing Chair :</b></p> <p>Dr. Poomima B Professor and Head, Dept. of IS&amp;E, BIET</p> <p><b>Address for Communication :</b></p> <p>Prof. Madhuri Martis Ph - 9909099908</p> <p>Prof. Nomitha Chawla Ph - 8884886448</p> <p><b>Organizing Committee:</b> Staff and Students of IS&amp;E Dept.</p>	 <p><b>Bapuji Educational Association (Regd.)</b> Bapuji Institute of Engineering and Technology, Davanagere-577004</p> <p><b>Two Days Workshop on</b> "DATABASE APPLICATION DEVELOPMENT" UNDER THE SKILL DEVELOPMENT CELL, ISE Host by Department of Information Science and Engineering</p>  <p><b>Date : 11-01-2023 and 12-01-2023</b></p> 
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Two Days Workshop on **“Database Application Development”** was conducted for 5<sup>th</sup> semester students on 11<sup>th</sup> Jan to 12<sup>th</sup> Jan 2023 in association with Skill Development Cell.



**Three Days FDP on “Introduction to Python Programming”** was conducted from 12<sup>th</sup> Dec to 14<sup>th</sup> Dec 2022 in association with ISTE and IEL.





**One Day-Invited Talk and IDEA Exhibition Program UDYAMSHEEL-22** was conducted for 5<sup>th</sup> semester students on 15<sup>th</sup> Nov 2022 in association with ISTE.

### **Faculty Publication for the year Aug 2022-July 2023**

Sl. No	Title of the Paper	Author Names	Journal	ISSN/IS BN No.	DOI
1	Novel Hybrid ARIMA-BiLSTM Model for Forecasting of Rice Blast Disease Outbreaks for Sustainable Rice Production	Dr. Poornima B.	Iran Journal of Computer Science (Springer)		1.8
2	Identity Recognition of Humans in Video Surveillance System Using CFPI	Dr Vinutha H P	International Journal of Innovative Research in Science, Engineering and Technology		DOI:10.15680/IJRSET.2022.1107137
3	Design Of An IoT Enabled Healthcare System For Improving The Performance Of Security and Authentication In Cloud Computing	Dr. Ashoka K	Telematique (Telecommunications ) ESCI Indexed		0.64
4	A Novel Technique For Detecting Sudden Concept Drift In Healthcare Data Using Multi-Linear Artificial Intelligence Techniques.	Dr. Sreenivasa B. R	Frontiers in Artificial Intelligence(Web of Science)		<a href="https://doi.org/10.3389/frai.2022.950659">https://doi.org/10.3389/frai.2022.950659</a>

5	A Novel Cluster Analysis Based Crop Dataset Recommendation Method in Precision Farming	Dr. Sreenivasa B. R	Computer Systems Science and Engineering		4.397
6	Modified AES Optimization Strategies With Hierarchical Security For Internet-of-Thing Applications	Dr. Rekha C	Webology (Scopus)	(ISSN: 1735-188X) Volume 18, Number 6, 2021	
7	Detection of Non-Helmet Riders And Extraction Of License Plate Number Using Yolo-V2 And OCR Method	Dr. Rekha C	Scopus Indexed : Neuro Quantology		Impact Factor: 0.453 (2017)
8	Prediction of Hypothyroid Disease in Early Stage Using Machine Learning Algorithms.	Jyothi G C	International Journal for Research in Applied Science & Engineering Technology (IJRASET)		<a href="https://doi.org/10.22214/ijraset.2022.45866">https://doi.org/10.22214/ijraset.2022.45866</a> 7.538
9	An Android Based Voice-Mail Application for Visually Impaired	Dr. Anitha G & Rekha B.H	International Journal of Innovative Research in Science, Engineering and Technology (IJIRSET)	e-ISSN: 2319-8753, p-ISSN: 2347-6710 Volume 12, Issue 5, May 2023	DOI:10.15680/IJIRSET.2023.1205403 Impact Factor: 8.423
10	Fabric Defect Detection Using Deep Learning Model	Patil N S	Science, Technology and Development Journal		DOI:16.10089/STD 6.1
11	An Android Based Voice-Mail Application for Visually Impaired	Rekha B.H & Dr. Anitha G	International Journal of Innovative Research in Science, Engineering and Technology (IJIRSET)	e-ISSN: 2319-8753, p-ISSN: 2347-6710	DOI:10.15680/IJIRSET.2023.1205403 Impact Factor: 8.423

				Volume 12, Issue 5, May 2023	
12	Novel Hybrid ARIMA-BiLSTM Model for Forecasting of Rice Blast Disease Outbreaks for Sustainable Rice Production	Dr. Varsha M Dr. Poornima B.	Iran Journal of Computer Science (Springer)		1.8
13	Alzheimer's Disease Prediction Using Deep Learning	Puneeth S P	Science, Technology and Development Journal		DOI:16.10089/ STD 6.1
14	A Novel Approach for Security Testing Using Burp suite Tool	Puneeth S P	International Journal of Innovative Research in Science, Engineering and Technology (IJIRSET)		DOI:10.15680/ IJIRSET.2022. 1107096 8.118
15	Deep Learning Techniques to Detect Malaria	Puneeth S P	International Journal of Innovative Research in Science, Engineering and Technology (IJIRSET)		DOI: 10.15680/IJIR CCE.2022.100 7063 8.165
16	Melanoma Disease Detection Using Deep Learning	Santhosh T	International Journal of Advanced Research in Science, Communication & Technology (IJARCST)		DOI: 10.48175/IJAR CET-5335 6.25
17	Intrusion Attacks Detection and Alerting System Using Machine Learning	Kamala R	International Journal of Innovative Research in Science, Engineering and Technology		DOI:10.17680/ IJIRSET.2022. 110 8167

**Faculty participation for the year [Aug-2022 to July 2023]**

<b>Name of the Faculty</b>	<b>Workshop/ FDP/ STTP / Webinar</b>	<b>Organized by</b>	<b>Date</b>
Dr. Anitha G.	Intelligent Schemes for Cyber Security (Hybrid mode)	UBDTCE, Davangere. (ATAL)	5 <sup>th</sup> to 16 <sup>th</sup> Sep 2022
Dr. Varsha M	Designing and Modelling of IoT , AI and ML Systems	AICTE ATAL Academy, Arm Education and STMICROELECTRONICS	1 <sup>st</sup> to 5 <sup>th</sup> Aug 2022
Dr.Patil N S	Taking Research to Next Level	SVCE, Bengaluru	26 <sup>th</sup> Sep to 1 <sup>st</sup> Oct 22
Jyothi G. C.	Intelligent Schemes for Cyber Security (Hybrid mode)	UBDTCE, Davangere. (ATAL)	5 <sup>th</sup> to 16 <sup>th</sup> Sep 2022
Rekha B.H	Taking Research to Next Level	SVCE, Bengaluru	26 <sup>th</sup> Sep to 01 <sup>st</sup> Oct 22
Puneeth S. P.	Taking Research to Next Level	SVCE, Bengaluru	26 <sup>th</sup> Sep to 01 <sup>st</sup> Oct 22
Hemashree H. C.	Taking Research to Next Level	SVCE, Bengaluru	26 <sup>th</sup> Sep to 01 <sup>st</sup> Oct 22
Santhosh T	Taking Research to Next Level	SVCE, Bengaluru	26 <sup>th</sup> Sep to 01 <sup>st</sup> Oct 22
Manjushree K. R.	Amazon Web Services	Dayananda Sagar Bengaluru	22 <sup>nd</sup> to 27 <sup>th</sup> Aug 2022
Roopa D E	Amazon Web Services	Dayananda Sagar Bengaluru	22 <sup>nd</sup> to 27 <sup>th</sup> Aug 2022
Sushma C.	Amazon Web Services	Dayananda Sagar Bengaluru	22 <sup>nd</sup> to 27 <sup>th</sup> Aug 2022
Divya M. S.	Amazon Web Services	Dayananda Sagar Bengaluru	22 <sup>nd</sup> to 27 <sup>th</sup> Aug 2022
Vinutha D	Amazon Web Services	Dayananda Sagar Bengaluru	22 <sup>nd</sup> to 27 <sup>th</sup> Aug 2022
Madhuri Martis	Taking Research to Next Level	SVCE, Bengaluru	26 <sup>th</sup> Sep to 01 <sup>st</sup> Oct 22

### Students' participation for the year 2022-23

Sl. No	Name of the Students	Name of the Workshop/ Seminar/ Lecture/ Conference / Competition/Course/ Fest	Organized By	Date	Participated / Presented/ Published/ Completed	Prizes won (if any)
1	Pooja S Bidari	NPTEL Online Certification	Indian Institute of Technology Kharagpur	Jan – Mar 2023	Completed	57%
2	Pooja B K	NPTEL Online Certification	Indian Institute of Technology Kharagpur	July – Oct 2023	Completed	76%
3	Pooja B K	NPTEL Online Certification	Indian Institute of Technology Kharagpur	Jan – Mar 2023	Completed	51%
4	Dhanush A G S	NPTEL Online Certification	Indian Institute of Technology Kharagpur	July – Oct 2023	Completed	58%
5	Tejaswini Pujari	NPTEL Online Certification	Indian Institute of Technology Kharagpur	July – Aug 2023	Completed	61%



**Students bagged Winner Rolling shield of Davana -2023**



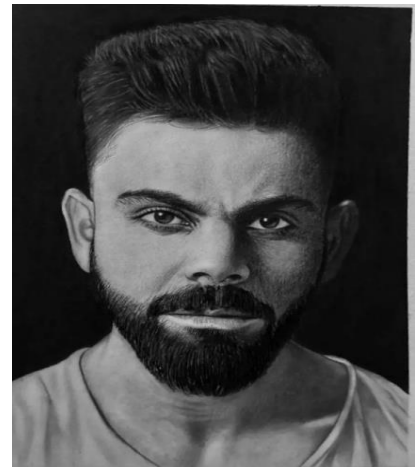
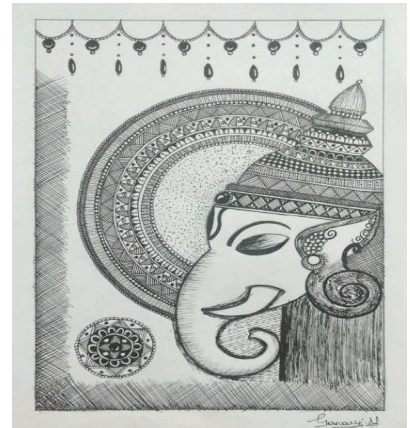
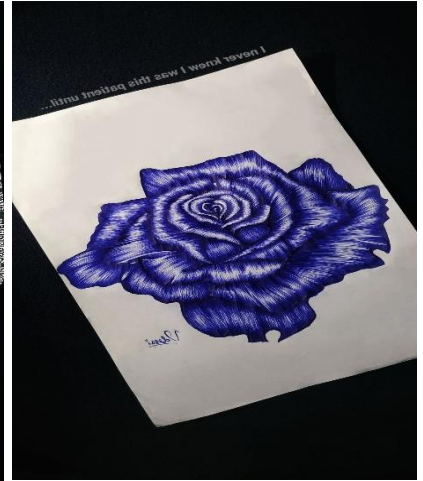
**Industrial visit to Kaynes Technology India Limited on 28th April 2023 with 47 students and 04 Professors.**

### Placements for the year 2022-2023

**Number of offers received: 73**  
**76% Placement**

Sl. No	Company Name	Total Number of Students Placed
1	TCS_Ninja	19
2	TCS_Digital	1
3	Maple Labs	1
4	FAI	4
5	KPMG	6
6	Tech Mahindra	3
7	SLK Software	3
8	Radisys	3
9	Cognizant (Genc Elevate)	1
10	Cognizant (Genc)	11
11	Rakuten	1
12	Tekworks	11
13	Minfy Technologies	1
14	Merced Benz R&D	3
15	Face Prep	6
16	Stratogent	1
17	Intellipaat	5
18	Toshibha Software	1
19	Kasmo	7
20	Sonata Software	3
<b>Total</b>		<b>91</b>

Art work by students



## Articles

### **The Web3 Revolution and the 8 Pillars of the Metaverse - A New Era of Online Experiences**

The internet as we know it is undergoing a significant transformation, with the rise of Web3 and the metaverse at the forefront of this change. Web3, a decentralized and user-owned internet powered by blockchain technology, is paving the way for a more immersive and interactive online experience. And the metaverse, a virtual world where users can interact with each other and digital environments, is set to revolutionize the way we connect, work, and play.

At the heart of this revolution lie eight key pillars that define the metaverse and its potential:

- 1. Decentralization:** Unlike today's internet dominated by large corporations, the metaverse will be owned and governed by its users. This empowers users with control over their data and online experiences, fostering a fairer and more democratic online space.
- 2. Interoperability:** Instead of isolated virtual worlds, the metaverse will be a network of interconnected realms. Users will seamlessly move between these worlds with their avatars and digital assets, creating a truly immersive and interconnected experience.
- 3. Real-time Interactions:** The metaverse will be a real-time environment, allowing users to interact with each other and their surroundings in real-time. This immediacy and presence will make the metaverse feel more like the real world, enhancing the experience.
- 4. Immersive Experiences:** Virtual reality (VR) and augmented reality (AR) will blur the lines between the real and virtual worlds, creating an immersive metaverse experience. Users will interact with their surroundings in a more natural and intuitive way, fostering deeper engagement.
- 5. Building Communities:** The metaverse will be a social world, enabling users to connect and build communities. Avatars and virtual spaces will facilitate self-expression and meaningful interactions, fostering strong connections and communities within the metaverse.
- 6. A Creator's Paradise:** The metaverse will be a haven for creativity, where users can create and share their own content and experiences. Open-source tools and platforms will empower creators, lower barriers to entry, and allow them to monetize their work within the metaverse.
- 7. Open Standards:** The metaverse will be built on open standards, ensuring its interoperability and Accessibility to all. This prevents any single entity from controlling the metaverse, fostering, innovation and fair competition among developers.
- 8. Security and Privacy:** Protecting user data is paramount. The metaverse will leverage blockchain technology and other security measures to ensure user data is safe from fraud and abuse, fostering a secure and privacy-conscious online environment.



The fundamental ideas that will guide the growth and development of the metaverse are embodied in these eight pillars. With the development of Web3 technologies and the increasing accessibility of virtual reality and augmented reality, the metaverse holds the potential to drastically alter our daily lives, careers, and interactions with the outside world.

We may better get ready for the exciting changes that are coming by comprehending the eight pillars of the metaverse and the Web3 revolution. The internet of the future will be decentralized, immersive, and participatory, with the metaverse assuming a pivotal role.



**Prof. Puneeth S P**  
**Assistant Professor**  
**Dept. of IS&E, BIET**

### **Next JS – REACHABLE TO REQUIREMENTS**

Next JS is a popular open-source react frame that gives users in building blocks to create fast web application. Users will not find any limited number of libraries and framework for modern web development if users are considering Javascript. Choosing the proper technology for the next project is the key to success. JavaScript programming language is one of the core technologies of the World Wide Web, alongside HTML and CSS. As of 2023, 98.7% of websites use JavaScript on the client side for web page behavior.

JavaScript is used to make web pages respond to user action, create dynamic content, and communicate with server. React is a Javascript library for building user interfaces based on components<sup>3</sup>. React can be used to develop single–page mobile or server–rendered applications with a framework like Next JS.

To run all these frameworks users need Node JS. Node JS is an open-source, cross-platform Javascript runtime environment for developing server-side and networking applications. This popular server platform is built-in, on Chrome’s V8 Javascript engine and enables users to use Javascript code outside the browser. While choosing the right library or framework for a user project, the user should always consider the developer experience. Developer generally chooses those types of frameworks or libraries that are easy and convenient to use.

### Head-to-Head Comparative Study between React and Next.js

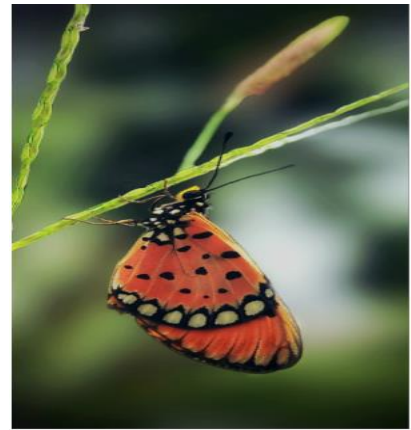
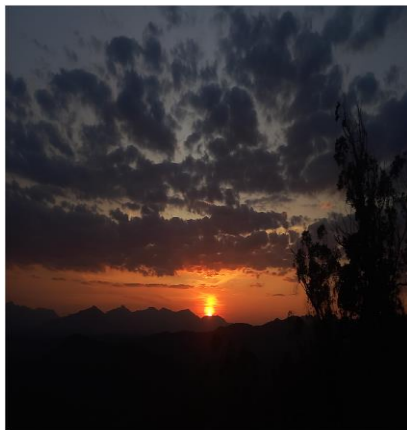
Features	React	Next.js
<b>Primary Purpose</b>	JavaScript library for building UIs.	React framework for building modern web applications.
<b>Core Strengths</b>	Component-based architecture, virtual DOM.	SSR, SSG, automatic code splitting.
<b>Ideal Use Cases</b>	Single-page applications, re-usable UI components, complex UI state management.	SEO-friendly web applications, high-performance web applications, data-driven applications.
<b>Additional Features</b>	Limited.	Richer set of features, including file-based routing, built-in CSS support, and image optimization.
<b>Server-Side Rendering</b>	The React app is a client-side rendered framework by default. Server-side rendering in React requires extra processes. It's generally harder implementing it with React.	Next.js supports pre-rendering. Instead of having the browser render everything from scratch, Next.js can serve pre-rendered HTML in two ways. One of them is server-side rendering (SSR). Next.js pre-renders the page into HTML on the server on every request.
<b>Maintenance</b>	React is well-maintained and releases updates on a routine basis.	The Next.js tool is adequately maintained. In the latest version of Next.js, user can maintain user's app with the "Maintenance Mode", which can be achieved with an environment variable and Redirects property in user next.config.js file.
<b>Performance</b>	React is equally advantageous when it comes to performance, e.g., it progressively loads components and minimizes costly DOM operations. User can analyze the performance of a React app by regularly testing, tracking, and monitoring aspects such as page load time, etc.	Apps built with Next.js are swift due to static sites and server-side rendering. These are effective by default thanks to various performance optimization features such as image optimization, which will significantly improve the performance of user application. Next.js Analytics allows user to analyze and measure the performance of pages using different metrics.
<b>Features</b>	React is also equipped with libraries like material UI and React-Bootstrap that can walk user through satisfactorily conducting a task. Finally, user can customize it for his project.	Next.js has incredible features that are available to create a practical web application. Such features include server-side rendering, static site generation, image optimizations, pre-rendering, internationalization, Next.js analytics, etc.
<b>Development Cost</b>	Using React for development wouldn't put a hole in user pocket. Compared to the other front-end libraries and frameworks, React code is easy to maintain and more flexible due to its modular structure.	To develop and maintain user's web application, user needs a dedicated Next.js developer and frontend developer, and it is a considerable cost to replace these people.
<b>Security</b>	React's constant updates make way for vulnerabilities, but there are guides provided that can strengthen the security of user application.	For user's data security in Next.js, it supports the authentication feature that verifies who a user is before giving access to data. This feature isn't inbuilt in Next.js.

**Way Forward:**

The choice between React and Next.js depends on the specific requirements of the project. React is an excellent choice for building UIs with its component-based approach and virtual DOM. Next.js, on the other hand, extends React's capabilities with SSR, SSG, and automatic code splitting, making it ideal for building SEO-friendly, high-performance, and data-driven web applications. Ultimately, the decision lies in carefully evaluating the project's needs and selecting the tool that aligns best with its objectives.

**Sagar. S****Basavanagowda.NG**

Final Year IS &amp; E, BIET

**Photography**

## Glimpse of Info Arohana -2023

