



VASIREDDY VENKATADRI INSTITUTE OF TECHNOLOGY
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DEPARTMENT OF INFORMATION TECHNOLOGY

IT PRAGNA – Department Magazine

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5G - HOW WILL IT TRANSFORM OUR WORLD?

Things have changed a lot since the first generation of mobile technology. The 1G era was defined by briefcase sized phones. In the lead up to 2G, the demand for mobile services expanded and never slackened. Phones that could fit in pocket and mobile internet access were hallmarks of the 3G world. Thanks to 4G, we have smartphones and app-stores.

Now that new use cases like connected automobiles, augmented reality, and improved video and gaming are possible thanks to 5G, both our personal and professional lives are being fundamentally transformed.

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What is 5G?

5G is the fifth generation of cellular networks. Up to 100 times faster than 4G, 5G is creating never-before-seen opportunities for people and businesses. Greater bandwidth, ultra-low latency, and faster connectivity are revolutionizing industries, expanding civilizations, and vastly improving day-to-day experiences. Services notably e-health, networked cars and traffic systems, and improved wireless cloud gaming that we once thought were futuristic are now available.

What characterizes 5G?

The same radio frequencies that are currently utilized for satellite communications, your smartphone, and Wi-Fi networks also support 5G, but it allows for much faster technological advancement.

5G is essentially about connecting things everywhere - consistently, without lag - so people can measure, evaluate, and manage things in real time. This transcends beyond being able to download a full-length HD movie to your phone in seconds (*even from a crowded stadium*).

What is 5G capable of?

The benefits of 5G go far beyond just enhancing your network connection. It opens up new possibilities, allowing us to offer ground-breaking solutions that benefit the entire society.

Imagine billions of connected devices gathering and sharing information in real time to reduce road accidents; or life-saving applications that can take flight thanks to lag-free guaranteed connections; or production lines so predictive they can prevent interruptions well before they occur.

How does 5G work?

Like other cellular networks, 5G uses radio frequencies that ride over spectrum to send data. But 5G networks can run on any frequency, including the "high-band," short-range airwaves.

Where is 5G available?

100 million people now have access to 5G Ultra-Wideband, which has been deployed particularly in public spaces where big audiences may congregate for events like concerts, sporting events, and city and town centers.

Benefits Of 5G

- ✓ Up to 10x faster than what you have now. So all your downloads take a fraction of the time – get a movie in minutes, or a song in seconds.
- ✓ Faster and safer than public wifi. So you can say goodbye to slow speeds when you need to get online, on the go. Be your own hotspot and stop worrying about hackers or snoopers.
- ✓ Built for locations where multiple users can use their phones simultaneously. In order to avoid being slowed down by those around you when connected, you can stream, share, post, work.



Article by :

R. Sudha Kishore
Assoc Professor

BLUE BRAIN



What is Blue Brain?

The Blue Brain project attempts to develop a synthetic brain by molecular-level reverse engineering of the mammalian brain.

Blue Brain technology

Blue Brain, an Artificial Brain which is an initiative taken by Swiss brain research that aims to recreate an artificial brain by performing reverse engineering on brain circuitry. The Blue brain project was initially founded on May 2005 at Brain and mind institute named EPFL (École Polytechnique Fédérale de Lausanne) in Switzerland that specializes in natural sciences and engineering. The simulations are carried out on a Blue Gene supercomputer built by IBM, hence the name "Blue Brain".



Introduction:

Artificial Brain is a software or hardware which is similar to functioning of biological human brain in terms of Memory, Feelings, Emotions, and decision making. Life span of every human being is limited, if a person dies knowledge and intelligence will be void. Before death of human beings, all contents of brain can be extracted using an Artificial brain and can be used forever.

The structure of human brain is still complex to understand by scientists. The supercomputer-based simulations and reconstructions built by Blue Brain offer a radically new approach for understanding the multi-level structure and function of the brain.

How is it Done?

The information is uploaded from human brain to supercomputers using a small robots called as "nanobots". they are too small that they can enter spine and central nervous system. Then after entering brain, nano bots starts scanning and monitoring structure of neurons.

Blue Brain's Scientific Milestones:

- The automatic re-creation by a computer of the electrical behaviour of any neuron in the brain. (2007)
- An algorithm for recreating the connectome of a neuronal microcircuit. (2015)
- Neocortical Microcircuitry Reconstruction and Simulation. (2015)
- In milestone three, the microcircuit's emergent dynamics are validated and explored. (2015)
- Blue Brain has solved a ten-year-old difficulty of mathematically growing the form of neurons. (2019)
- An algorithm connecting the mouse neocortex's 11 million neurons. (2019)
- To apply their algorithmic reconstruction approach to structures with direct neocortical relevance. (2019)
- The Neuro-Glia-Vascular Architecture is the first digital reconstruction of the brain's power source. (2021)



The primary objective of the blue brain project is to extract and virtually store information from the human brain. Hence, the knowledge is in the form of a virtual brain, even after the death of humans. In addition, we can preserve the knowledge and recollections of important figures eternally in the form of a virtual brain and investigate treatments for various brain illnesses. Furthermore, the primary disadvantage of the blue brain is that the information saved is susceptible to manipulation or misuse by hackers.



Article by-Ch. Sai Sindhu

20BQ1A1242

NEWS MAKING FEATURES

Theatre's day



Theatre club of the college made the audience spell bound with a series of skits played by the impeccable dramatic actions of students, who are trained specially in those clubs. The students of Information Technology Department played a drama named "MOSAPOINATHANDRI ..!".

Industrial trip to Vizag



The visit to the MOURI Tech company, the HR Manager Mr. Abhishek Chandel described the vision and mission of the company's success and the establishment of branches around the world from the year 2005 to 2019 (USA, INDIA, RSA, GERMANY, UAE, AUSTRALIA, CANADA and UK).

Farewell Meeting For Final Year Students



Sri Vasireddy Vidyasagar, Chairman of VIVA-VVIT Institutions visited the venue along with Sri S. Badari Prasad, Secretary and Sri M.Sree Krishna, Academic Secretary, Principal Dr.Y.M.Reddy and Dean of Academic Dr. N. Kumara Swamy and gave away their blessings for the future of outgoing students.

Online Bootcamp on Basics of Android App Development



LAG In Collaboration with the Google Developer Relations team selected Vasireddy Venkatadri Institute of Technology, to offer Google's Android Development with Kotlin course for Faculty and Students entitled with the name called "Android with Kotlin Bootcamp", a Faculty Development Programme (FDP) for Faculty from June 14th-16th 2022 in Google Code Labs.

International conference



International Conference On Advances in Communications, Computer Vision and Electrical System Technologies (ICACCEST-2022), on 4th-5th March, 2022 Organized by Departments of IT

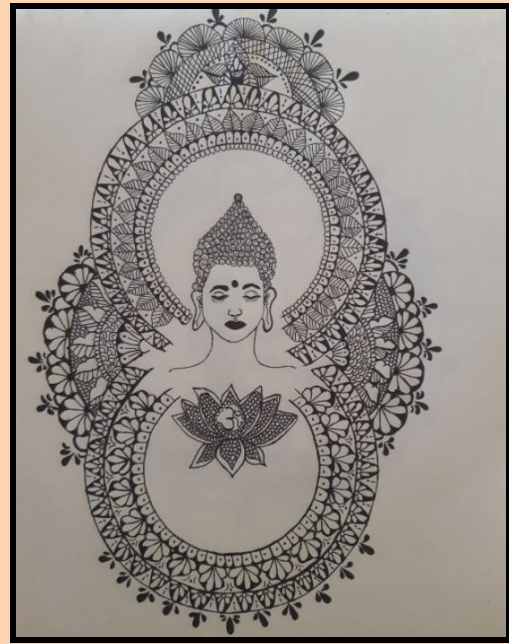
Wipro Certification by the faculty



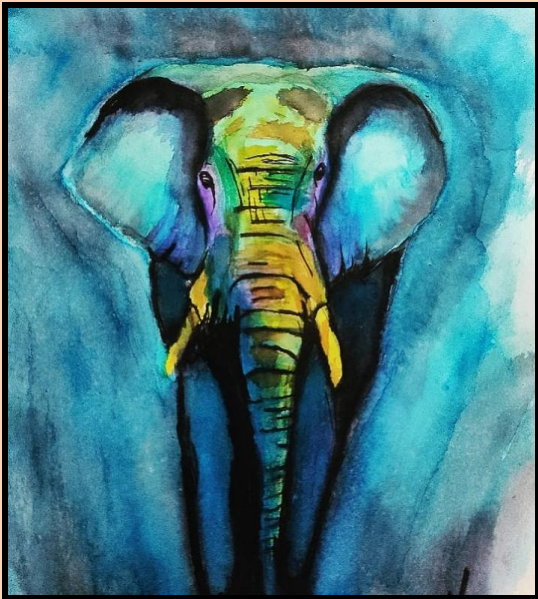
As part of Training and Placement cell, Mr.N.Ashok, Assistant Professor and Training Head, from the Department of Information Technology, attended the one week Wipro Certified Faculty Program conducted by Wipro TalentNext in "Java Stream" from 13-06-2022 to 24-06-2022



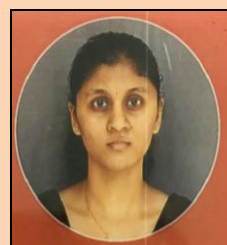
K. Yuktha Sri
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Sk. Safeena
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Ch. Venu Karthika
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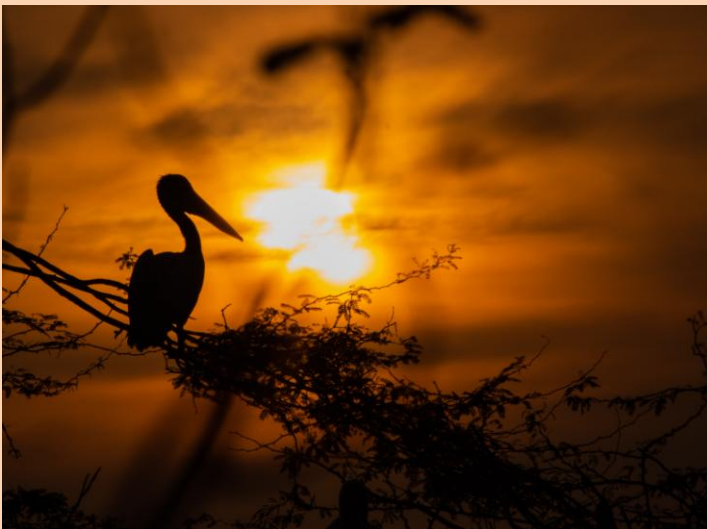
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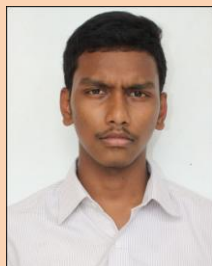
B. Abhishek
20BQ1A1214



G. Harish Sai
19BQ1A1241



Y. Sekhar
21BQ5A1221



N Sai Kumar
16BQ1A1237

Exciting and rewarding is how I would describe my time at Vasireddy Venkatadri Institution of Technology. Throughout my 4 years of engineering at VVIT, I had lot of opportunities to develop analytical skills, leadership and proactive thinking through various programs and events.

These attributes were the key reasons because of which I was successfully placed at 'Accenture'. I am very glad to my college Vasireddy Venkatadri institute of Technology for both faculty and training and placement department. I am grateful to VVIT-both the faculty and the Training & Placement Department. They've made efforts ensuring maximum number of placed students. The college started grooming us for placements in the first few months including courses.

The college has good atmosphere to study and play. The best part of the VVIT is SAC. I was completely confident and cracked the aptitude and technical tests and interview rounds due to the mock tests and interviews conducted by the Training & Placement Department and our faculty members of our college. This college provides a great platform for skills enhancement and to get a great learning experience.

Journey at VVIT was one of the best experiences of my life. It's difficult to sum up the memories and experience of four years in few lines. The campus has good infrastructure and is very beautiful with perfect blend of nature. There is something motivational and special in this environment and infrastructure which made us study and enjoy co-curricular activities. All the faculty and staff members are very helpful and they guided us all the time. Different events and sessions did boost my confidence to a great extent that I can experience at my workplace now. These four years have given me friends for life. It has been an unforgettable journey.

At first i want to share my views on Technical student chapters. In my college every department have their student bodies or chapters like civil body organizing by students of civil department body organizing by students of civil department and ACM body organizing by students of computer science and Information Technology departments. In our college we have Student Activity council (SAC) which is responds for every aspect of us.



S.Rahithi
16BQ1A1254



Department Vision:

To produce IT professionals who can develop globally competitive and socially useful information technology enabled solutions and products that offer cost effective solutions, for organizations, in particular and society in general, through their innovative ideas, and to create a knowledge pool through research in this field.

Department Mission:

1. Producing information technology professionals for the Global IT industry.
2. Developing student centric and qualitative teaching-learning practices.
3. Establishing infrastructure that endows cutting edge technology requirements of the industry.
4. To extend service to the public, the state and the nation at large by building quality engineers.
5. To carve disciplined and socially, technologically better responsible citizens.
6. To make the students pursuing information technology the technological ambassadors of VVIT in whatever part of the world they find themselves in their future careers.

Program Educational Objectives (PEO'S):

PEO-1: Solid Foundation and Core Competence

To provide the graduates with concrete base in Information Technology, to pursue higher studies and to succeed in industry / technical profession with global competence by imparting acute technical skills like designing, modelling, analyzing and problem-solving on top of solid foundation in mathematical, scientific, computing and engineering fundamentals.

PEO-2: Employability & Research Spur

To train the graduates for a higher degree of employability in both public and private sector industries at national and international level by imparting ability to Re-learn and innovate in ever-changing global economic and technological environments and to contribute effectively in research and development.

PEO-3: Professional Skills and Societal Contribution

To inculcate the graduates to have basic interpersonal skills, effective communication skills to teamwork/ lead in multidisciplinary approach, under diverse professional environments by handling critical situations through lifelong learning with an ethical attitude(administrative acumen) and an ability to relate engineering issues to broader social context.

PEO-4: Real World Competency & Innovation

To enable students with good scientific and engineering breadth and technology skills so as to comprehend, analyze, design, and create novel products and solutions for the real life problems to emerge as researchers, experts, educators & entrepreneurs.