# MADHAV INSTITUTE OF TECHNOLOGY & SCIENCE

## "TECH SAGA"

A News Letter of CSE & IT Department

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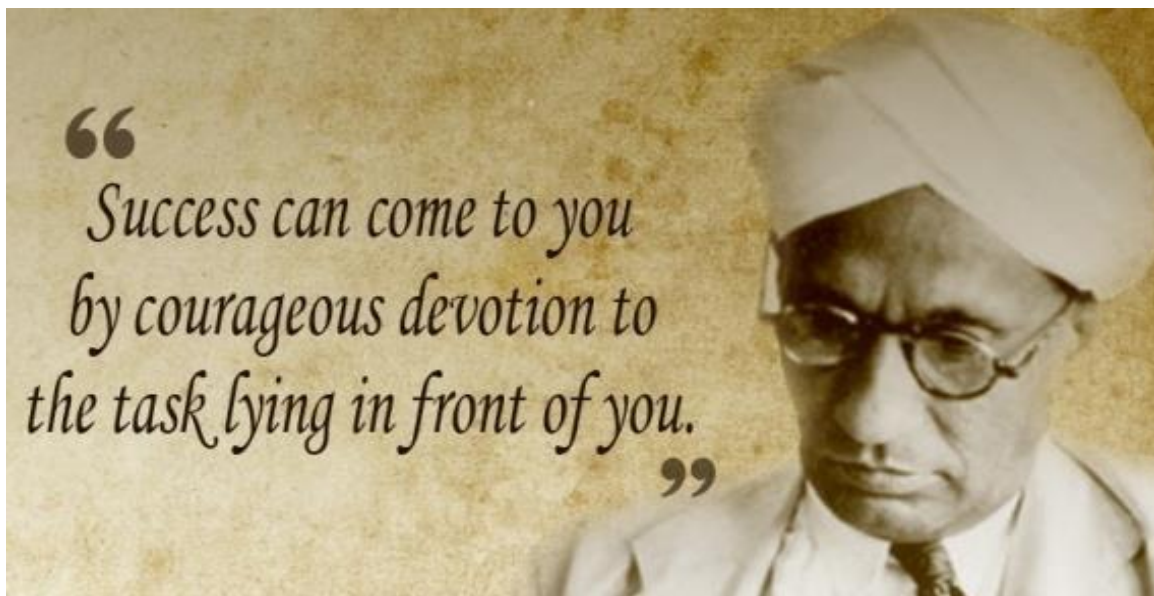- Faculty Outreach
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*Success can come to you by courageous devotion to the task lying in front of you.*

# PUBLICATIONS IN JOURNALS

1. Yogita Solanki, **Sanjiv Sharma** "Analysis and Prediction of Heart Health using Deep Learning Approach ", International Journal of Computer Sciences and Engineering" ISSN : 2347-2693 ,Volume-7 , Issue- 8 , Page no. 309-315, Aug-2019,IF:3.022.

2.Sadhna Sharma, **Sanjiv Sharma** "Identification of Accurate Classification Technique for Crime Investigation Using Ensemble Approach", International Journal of Computer Sciences and Engineering, ISSN: 2347-2693, Volume-7, Issue-8, Page no. 137-143, Aug-2019, IF: 3.022.

3. Yogita Solanki, **Sanjiv Sharma** "A Survey on Risk Assessments of Heart Attack Using Data Mining Approaches" I.J. Information Engineering and Electronic Business, 2019, ISSN: 2278-3075, 11, 4, 43-51 Published Online July2019.

4. Sadhna Sharma, **Sanjiv Sharma** ,"A Comparative Study of Crime Investigation Using Data Mining Approaches", International Journal for Research in Applied Science & Engineering Technology ISSN: 2319-8753,Vol.7,pp.2073-2079,2019,7.08.

5. **Parul Saxena, R. S. Jadon**, "An Effective Approach for Forest Fire Detection In Surveillance Video_Using_Rule-Based and Temporal Variations", International Journal of Scientific & Technology Research, vol 8, issue 9, September2019.

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6. **Hemlata Arya**, "survey on various routing protocol and mobility models used in Mobile Ad Hoc Network", UGC Approved Journal of "Current Trends in Information Technology" vol 9, issue3, December 2019.(communicated).

# MoUs SIGNED

- Department of CSE & IT signed a MoU with Praedico Global Research Pvt. Ltd., New Delhi on 14th August, 2019 for mutual development of Industrial Projects, provide internships in Industry Oriented subjects for the students of the department and for the exchange of personnel's.

# ACTIVITIES ORGANIZED

1. **WORKSHOP ORGANIZED:** CSE & IT Department Organize a TEQIP-III sponsored National Workshop on *"RECENT TRENDS IN AI, DEEP LEARNING AND ITS APPLICATIONS*, dated 28-29 September 2019". Motivate and equip the participants with the basics as well as the recent trends in Artificial Intelligence & Deep Learning, and their applications for solving wide variety of problems in various fields of engineering and technology. To expose the faculty members and students with the newer dimensions of the area with their practical approaches to tackle the real life problems in engineering and technology
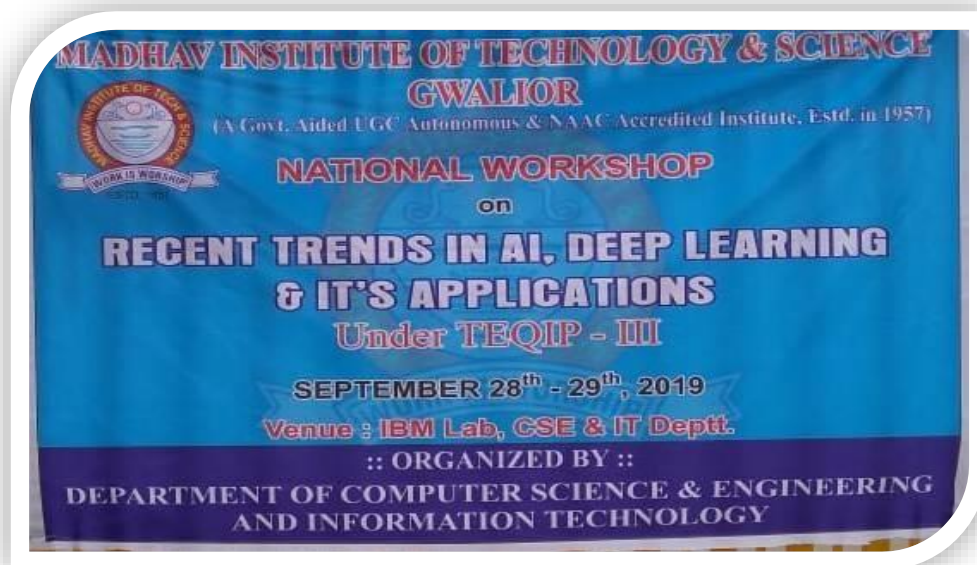


and other related disciplines.

## एमआइटीएस में नेशनल वर्कशॉप
# हर फील्ड में हो रहा एआइ का उपयोग

**पत्रिका PLUS रिपोर्टर**

ग्वालियर ● माधव प्रौद्योगिकी और विज्ञान संस्थान में 'ऑन आर्टिफिशियल इंटेलीजेंस' विषय पर दो दिवसीय सेमिनार का शुभारंभ किया गया। इस मौके पर डीप लर्निंग एंड एप्लीकेशन का उद्घाटन भी किया गया। कार्यक्रम को संबोधित करते हुए संस्थान के डॉ अखिलेश तिवारी ने कहा कि वर्तमान समय में आर्टिफिशियल इंटेलीजेंस का हर क्षेत्र में उपयोग है। वर्कशॉप के पहले दिन थापर विश्वविद्यालय पटियाला से डॉ प्रशांत सिंह

### पार्टिसिपेंट्स को दिए सर्टिफिकेट

वर्कशॉप में जेपी विश्वविद्यालय नोएडा से आए डॉ. सारस्वत ने मशीन लर्निंग और न्यूरल नेटवर्क के बारे में कहा कि आर्टिफिशियल इंटेलीजेंस के अंदर ही मशीन लर्निंग एवं डीप लर्निंग का जन्म हुआ है। उन्होंने न्यूरल नेटवर्क की ट्रेनिंग और टेस्टिंग को हैंड्स ऑन ट्रेनिंग के माध्यम से समझाया। बनेड़ विश्वविद्यालय बैटर नोएडा से आए डॉ. बादल ने डीप लर्निंग की बारीकियों से अवगत कराया। उन्होंने बताया कि किस तरह इमेज प्रोसेसिंग और डीप लर्निंग एक दूसरे के पूरक बन गए है। कार्यक्रम के ऑर्गेनाइजिंग कमेटी में प्रो. अखिलेश तिवारी, प्रो नेहा भारद्वाज एवं विभाग की अन्य फैकल्टी शामिल थीं। कार्यक्रम का समापन सभी को सर्टिफिकेट प्रदान कर किया गया।

राणा ने मशीन लर्निंग के सिद्धान्तों से अपने सेशन को शुरू किया। प्रतिभागियों को 'आर' भाषा का प्रयोग करके अपने

आसपास की दिक्कतों को हल करने के लिए अपना खुद का मॉडल बनाना सिखाया गया।

**2. Engineers day celebration:** Engineers day celebration in memory of Sir Mokshagundam Visvesvaraya on 16th September 2019 - Organized by IWWA, Gwalior- IEEE Student Chapter MITS, IETE Gwalior Sub-center.



# FACULTY ACCOLADES

- **Dr. Sanjiv Sharma,** Assistant Professor CSE &IT Department delivered invited talk and guest or expert lecture on the topic "**Foundation of Computer System**", Sept, 21, 2019, Government Engineering CollegeBharatpur.

- **Dr. Sanjiv Sharma**, Assistant Professor CSE &IT Department delivered invited talk and guest or expert lecture on the topic **"Humanities Inspired Computing",** Sept, 14, 2019, Jiwaji University,Gwalior.

- **Prof. Mahesh Parmar**, Assistant Professor CSE &IT Department deliveredan Expert Lecture on "Key Concept of Programming" in order to improve student excellence and learning, Sponsored by TEQIP-III at Government Engineering College, Bharatpur on 21/09/2019.

- **Dr. R.S. Jadon, Professor** CSE &IT Department, Chief Guest in inaugural session of Kriti 2019, 11th National Software Workshop on "Machine Learning Using Python" on 19th sep 2019 at 10.00AM PIMG Gwalior.

- **Dr. R.S. Jadon, Professor** CSE & IT Department delivered expert lectureat Academic Staff College, LNIPE Gwalior on 21.09.2019 at 2.00PM.

- **Prof. Jamvant Singh Kumare**, has Delivered Lecture in Induction Programme for newly admitted student on "Prime Minister Special Scholarship Scheme" on 20th August, 2018 at MITSGwalior.

**1. INDUSTRIAL VISIT TO INFOSYS, CHANDIGARH:**

To make the students well versed with the working culture at Infosys and were made to understand Agile Methodology of working, which is the latest technology of work at Infosys, Chandigarh campus. Students were motivated to strive for the practices followed at Infosys campus. They spent time and interacted with the industry experts which helped them understand the latest industry trends and this helped in bridging the gap in learning and practical implementation.

1. **Extension Activity under the Dept. of CSE & IT:** Prof. Jamvant Singh Kumare Organize "**Global Climate Change Strike**" event on27/09/2019.

## 2. SPIC MACAY HERITAGE CLUB:

Dr. Manish Dixit, Professor CSE&IT department organize an event "Rajasthan Sufi Performance" Under the SPIC MACAY HERITAGE CLUB, dated 03 Sept 2019.

- **MIT researchers have developed a bot equipped with artificial intelligence** that can beat human players in tricky online multiplayer games where player roles and motives are kept secret.

Many gaming bots have been built to keep up with human players. Earlier this year, a team from Carnegie Mellon University developed the world's first bot that can beat professionals in multiplayer poker. Deep Mind's Alpha Go made headlines in 2016 for besting a professional Go player. In these games, however, the bot knows its opponents and teammates from the start.



Bot can beat humans in multiplayer hidden role games
Using deductive reasoning, the bot identifies friend or foe to ensure victory over humans in certain online games.

At the Conference on Neural Information Processing Systems next month, the researchers will present DeepRole, the first gaming bot that can win online multiplayer games in which the participants' team allegiances are initially unclear. The bot is designed with novel "deductive reasoning" added into an AI algorithm commonly used for playing poker.
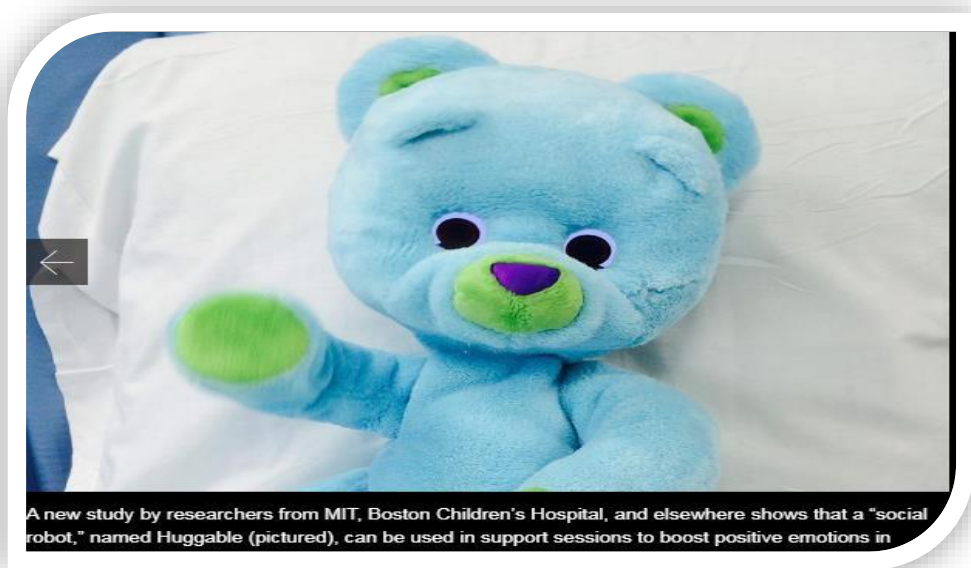
This helps it reason about partially observable actions, to determine the probability that a given player is a teammate or opponent.In doing so, it quickly learns whom to ally with and which actions to take to ensure its team's victory.

The researchers pitted DeepRole against human players in more than 4,000 rounds of the online game "The Resistance: Avalon." In this game, players try to deduce their peers' secret roles as the game progresses, while simultaneously hiding their own roles. As both a teammate and an opponent, Deep Role consistently outperformed human players. ."If you replace a human teammate with a bot, you can expect a higher win rate for your team. Bots are better partners," says first author Jack Serrino '18, who majored in electrical engineering and computer science at MIT and is an avid online "Avalon" player

The work is part of a broader project to better model how humans make socially informed decisions. Doing so could help build robots that better understand, learn from, and work with humans.

"Humans learn from and cooperate with others, and that enables us to achieve together things that none of us can achieve alone," says co-author Max Kleiman- Weiner, a postdoc in the Center for Brains, Minds and Machines and the Department of Brain and Cognitive Sciences at MIT, and at Harvard University. "Games like 'Avalon' better mimic the dynamic social settings humans experience in everyday life. You have to figure out who's on your team and will work with you, whether it's your first day of kindergarten or another day in your office."

- **Social Robots can benefits hospitalized children,** interacting with robot teddy bear invented   MIT boosted young patients positive emotions, engagement and activity level.



A new study by researchers from MIT, Boston Children's Hospital, and elsewhere shows that a "social robot," named Huggable (pictured), can be used in support sessions to boost positive emotions in

A new study demonstrates, for the first time, that "social robots" used in support sessions held in pediatric units at hospitals can lead to more positive emotions in sick children.

Many hospitals host interventions in pediatric units, where child life specialists will provide clinical interventions to hospitalized children for developmental and coping support. This involves play, preparation, education, and behavioral distraction for both routine medical care, as well as before, during, and after difficult procedures. Traditional interventions include therapeutic medical play and normalizing the environment through activities such as arts and crafts, games, and celebrations.

- **Technique identifies T cells primed for certain allergies or infections,** Researchers develop method to isolates and sequences the RNA of T cells that react to specific target



Technique identifies T cells primed for certain allergies or infections
Researchers develop a method to isolate and sequence the RNA of T cells that react to a specific target.

When your immune system is exposed to a vaccine, an allergen, or an infectious microbe, subsets of T cells that can recognize a foreign intruder leap into action. Some of these T cells are primed to kill infected cells, while others serve as memory cells that circulate throughout the body, keeping watch in case the invader reappears. MIT researchers have now devised a way to identify T cells that share a particular target, as part of a process called high-throughput single-cell RNA sequencing. This kind of profiling can reveal the unique functions of those T cells by determining which genes they turn on at a given time. In a new study, the researchers used this technique to identify T cells that produce the inflammation seen in patients with peanut allergies.

- **Autonomous Driving**

  Tesla chiefElon Musk has said he expects his company to create a truly "complete" autonomous vehicle by this year, and the number of vehicles capable of operating with a lesser degree of autonomy – such as automated braking and lane-changing – will become an increasingly common sight. Google's sister-company Waymo has justcompleted a trial of autonomous taxis in California, where it transported more than6200 people in the first month. It won't just be cars, of course – trucking and shipping are becoming more autonomous, and breakthroughs in this space are likely to continue to hit the headlines throughout2020.

- **Extended Reality (XR) a catch-all term**

  It refers to virtual, augmented, and mixed reality. Virtual reality (VR) provides a fully digitally immersive experience where you enter a computer-generated world using headsets that blend out the real world. Augmented reality (AR) overlays digital objects onto the real world via smartphone screens or displays (think Snapchat filters). Mixed reality (MR) is an extension of AR that means users can interact with digital objects placed in the real world (think playing a holographic piano that you have placed into your room via an AR headset).With Oculus Rift and Vive headsets providing the current state-of-the-art in videogames, and smartphone features such as camera filters and Pokemon Go-style games providing the most visible examples of AR.



- **Blockchain Technology**

Blockchain is essentially a digital ledger used to record transactions but secured due to its encrypted and decentralized nature. During 2019 some commentators began to argue that the technology was over-hyped and perhaps not as useful as first thought. However,



continued investment by the likes of FedEx, IBM, Walmart and MasterCard during 2019 is likely to start to show real-world results, and if they manage to prove its case, could quickly lead to an increase in adoption by smaller players. Block chain may make selling recorded **music** profitable again for artists by cutting out music companies and distributors like Apple or Spotify. The music you buy could even be encoded in the block chain itself, making it a cloud archive for any song purchased. Because the amounts charged can be so small, subscription and streaming services will become irrelevant. 2020 will also see the launch of Facebook's own block chain-based crypto currently Libra, which is going to create quite a stir.