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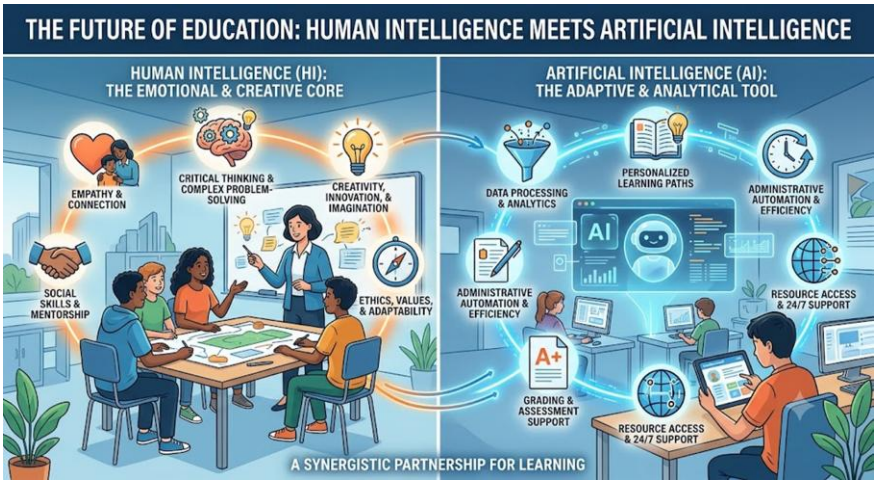
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Human Intelligence Meets Artificial Intelligence

Education is entering a new era where **Human Intelligence (HI)** and **Artificial Intelligence (AI)** are increasingly working together. AI tools are transforming the way students learn, teachers teach, and institutions deliver education. From personalized learning and intelligent tutoring systems to automated assessments and AI-assisted research, technology is making education more accessible, adaptive, and efficient.

However, the future of education is not about replacing teachers with machines. **AI can provide information, analyze data, and automate routine tasks, but human intelligence provides empathy, creativity, critical thinking, ethical judgment, and inspiration.** Teachers will continue to play a vital role as mentors who guide students to question, explore, collaborate, and apply knowledge meaningfully.

The emergence of generative AI also brings new responsibilities. Students must learn not only how to use AI effectively, but also how to verify information, protect academic integrity, recognize bias, and use technology responsibly. Education must therefore move beyond memorizing information toward developing **problem-solving abilities, adaptability, communication, creativity, and lifelong learning**.



The classroom of the future will not be a competition between humans and machines. It will be a collaboration between the two. **AI can enhance the learning experience, while human intelligence gives it purpose and direction.**

The future of education belongs to those who can combine the **power of technology with the values of humanity**—creating learners who are not only technologically capable, but also thoughtful, responsible, and innovative citizens.

Research Projects in Progress from Govt. Bodies

- AICTE project of Prof. V. Chittaranjan Das and Dr. K. Praveen Kumar on 'Synthesis and Characterization of MWCNT/UHMWPE Nanocomposites for Orthopedic Applications has been completed.
- A DST-AMT project of Dr. K. Sobha and Dr. S. Radhika on 'Wound Dressing Material Containing Copper-Coated Cotton Fabrics and Piezoelectric Electrospun Biopolymer Nano-Fibrous Composites' has been completed.

Industrial Research Projects Completed

- Research project on 'Mechanical and Electrical Behaviour of Boron &Vanadium Doped Fe-6.5 (Wt. %) Si Soft Magnetic Alloy Ribbons Fabricated by Direct Powder Rolling' of K. Ravindra, V. Chittaranjan Das, K. Praveen Kumar.
- Research project on 'Improvement of COP of Air-Conditioning Systems by Using Different Types of Insulations and Nano-Compressor Oil' of N. V. V. S. Sudheer, B. Ramgopal Reddy, V. Tarachand, and Md. Hasheer.
- Research project on 'Investigation on Performance Improvement Methods of the Transformer using Nano fluids in the perspective of cooling' of G. Srinivasarao, C. Srinivas, K. Balaprasad, N. Govind, and Sneha. H. Dhoria
- Research project on 'Evaluation and Optimization of Process Parameters for Agitation in Concrete Mixing' of C. Tarasasanka, S. Radhika, and J. P. Karthik
- Research project on 'Development and Characterization of Boron & Vanadium Doped Fe-6.5 (Wt. %) si Soft Magnetic Alloy Ribbons with Tio2 Coatings', K. Srinivas, D. V. V. Krishnaprasad, G. Chaitanya, V. Ramakoteswara Rao, J. Ranga Raya Chowdary.
- Research project on 'Influence of Heat Treatment on the Characterization of Alumina reinforced AZ91 Mg alloy Metal Matrix Composites' of Ch. Devaraj, M. Vijaya, A. Muddu, G. Kishore Chowdari, and K. Hari Prasad.
- Research project on 'Optimization of Selective Laser Melting (SLM) Process Parameters using Taguchi and Super Ranking Concepts to Produce Ti-6Al-4V Alloy samples' of R. Sreenivaslu, D. Swapna, K. L. Chaitanya, D. Kondalarao, Y. N. V. Sairam, T. N. S. Ramakrishna.

Patents filed/Published/Granted

- J. Purushottam Karthik, A. Poojith E. Pawan Kumar G. Hari Krishna, 'Preparation and Performance Analysis of Graphene Nanofluids for Solar Applications. Application No: 202541101202, 28 Nov. 2025.
- Sneha. H. Dhoria, Shaik Sai Chaithanya, Kavuri Datta Mani Kanta Chowdary, 'Comparative Study Of Machine Learning Models For Predicting Single Bead Geometry', Application No: 202541101181, 28 Nov. 2025.
- Ch. Deva Raj, Kakumanu Raghu Prasad, Purimetla Kanishka Kumar, Mekala Anil, 'Machine Learning Based Prediction Of Corrosion Behaviour In Magnesium Alloys For Biomedical Implants', Application No. 202541101182, 28 Nov. 2025.
- D. Kondala Rao, Palakeerthi Balaji, Meka Ajay Sai Krishna, Shaik Sameer, 'Development Of Fire Fighting Robot', Application No. 202541101183, 28 Nov. 2025.
- P. Suresh Kumar, Y. Hemanth Kumar, P. Abdul Khadar, M. Sai Ajay Kumar, 'Autonomous Enabled Smart Agriculture Robot', Application No. 202541101184, 28 Nov. 2025.
- Muddu Allaparthi, Chakka Jyothi Akhil, Badri Dilleswara Rao, 'Design and Development of Walking Assistive Devices', Application No. 202541101201, 28 Nov. 2025.
- Y. N. V. Sairam, Y. Krishna, S. Sai Babu, 'Experimental Investigation And Characterization of Lanthanum Hexaaluminate Reinforced AA6061 Composites', Application No. 202541101203, 28 Nov. 2025.
- K. L. Chaitanya Addanki Venkateswara Rao Gunti Peetar Paul Gajulavarthi Prasush Teja, 'Machine Learning Techniques For Predicting Wear Rate In LM26 /Gr Composite', Application No. 202541101204 , 28 Nov. 2025.
- G. Kishore Chowdari, Dammu Singaiah, Kode Sai Tarun, Tavva Deepak Sai, 'Investigation of The Mechanical Properties of Bamboo Fiber and Fly Ash Powder Reinforced Epoxy Composites', Application No. 202541101205 , 28 Nov. 2025.
- D. Swapna, M. Dhanunjay, K. Veera Venkata Phanindhra, Sk. Sadhik Basha, 'Multi-Objective Optimization of Waam Process Parameters Using Integrated Grapca For Mild Steel Using GMAW', Application No. 202541101229, 28 Nov. 2025.
- V. Tarachand, Dhaniyala Maniteja, Guntupalli Shyam, Karla Naveen, 'Thermodynamic Analysis of Blade Cooled Gas Turbine Using Thermal Energy Storage(Tes) System', Application No. 202541101230 , 28 Nov. 2025.
- Radhika Sajja, Yanamala Naveen Kumar, Koppula Thanoj Kumar, Shaik Ajmitulla, 'Friction Surfacing of Aa5083 on Aa7075: Influence of Process Parameters on Mechanical Properties', Application No. 202541101231, 28 Nov. 2025.

- K. Hari Prasad, Devarapalli Gopi Sai, Billa Chandra Sekhar, Goudaperu Pavan Kumar, Garela Manoj Kumar, 'Comparative Analysis of Aluminum Oxide and Cerium Oxide Nanoparticles on Performance and Emission Characteristics', Application No. 202541101232 , 28 Nov. 2025.
- M. Vijaya, M. Venkata Sai Kiran, Dasari Nagaraju, Aithi Jagan, 'Study on Thermal Perfomance Enhancement of A Solar Still Using Cnt - Ctab Nanofluid', Application No. 202541101233, 28 Nov. 2025.
- N. V. V. S. Sudheer, B. Ramgopal Reddy, C. Srinivas, K. Bala Prasad, S. Jaya Venkata Kushal, K. Jeeva Ratnam Talupuri S, 'Systems and Methods for Controlling Condenser Air Temperature in Split Air Conditioning Units Using Refrigerant', Application No. 202541097690 A, 5 Dec. 2025.

Research Paper Publications

- Veera Venkata Siva Sudheer Nakka, Karteeka Pavan Kanadam, Ramgopal Reddy Bijjam and Srinivas Chandanam, 'Effect of External Heat Source on Surface Roughness in Turning of Al/SiC Metal Matrix Composites: A Comparative Study of Optimization Methods', Revue des Composites et des Matériaux Avancés-Journal of Composite and Advanced Materials, 35(6), 1029−1140, December 2025, (SCI) https://doi.org/10.18280/rcma.350613
- Ch. Sai Krishna, S.B.R. Devireddy, P. Rama Murthy Raju, G. Kishore Chowdari & N. Naresh Babu, 'Effect of Fiber Orientation and Surface Treatment on the Physical and Mechanical Properties of Areca Catechu Stem Fiber-Reinforced Epoxy Composites', Advances in Materials and Processing Technologies, December 2025, (WOS) https://doi.org/10.1080/2374068x.2025.2610943
- Bala Prasad K, Meduri O, Dhana Raju V, Azmeera A. K, Venu H, Subramani L, & Soudagar M. E. M, ''Effect of Split Fuel Injection Strategies on the Diverse Characteristics of CRDI Diesel Engine Operated with Tamarind Biodiesel', Energy Sources, Part A: Recovery, Utilization, and Environmental Effects, 47(1), 3566-3584, December 2025, (SCI) https://doi.org/10.1080/15567036.2020.1856973
- Sunil Ratna Kumar K, Devireddy SBR, Gopala Rao T, Sudheer Kumar B, Bala Prasad K, 'Influence of Alkali Treatment and Fiber Percentage on the Mechanical and Thermophysical Properties of Gypsum Composites Filled with Hemp Fiber', Materials Physics and Mechanics, 53(3), 79-93, December 2025, (SCI) https://doi.org/10.18149/MPM.5342025_7
- Sneha H. Dhoria, Abd Alrahman Mohammad, D. Deepthi, Jahnavi Sakhamuri, M. Zubairuddin, Pirsab Attar & Habtamu Alemayehu, 'Product Recommendation System Based on Enhanced Real-time Face Emotion Recognition', Discovery Applied Sciences, 7, Nov. 2025, (WOS) https://doi.org/10.1007/s42452-025-07954-7
- Nair Jayashri N, V. Dhana Raju, T. Nagadurga, Manzoore Elahi M. Soudagar, Harish Venu, K. Bala Prasad, TM Yunus Khan, Syed Waheedullah Ghori, and S. Ramesh, ''Experimental Study on Palmyra Oil Biodiesel Blends in CI Engines: Role of Injection Pressure and EGR in Performance Enhancement and Emission Reduction', Case Studies in Thermal Engineering, 75(107), Nov. 2025, (SCI) https://doi.org/10.1016/j.csite.2025.107165
- Vivek Sivakumar, Vedhasakthi K, Anurekha G.S, Kurra Hari Prasad, Ravindaran Thangavel & Poomalai R, 'Machine Learning-Based Prediction of Strength Characteristics of Cement-Stabilised Soil Incorporating Construction and Demolition Waste and Polypropylene Fibres', Multiscale and Multidisciplinary Modeling, Experiments and Design, 9(20), Nov. 2025, https://doi.org/10.1007/s41939-025-01086-6
- Naga Venkata Srinivas Borra, Veera Venkata Krishna Prasad Davuluri, M. Venkata Kiran Kumar, Ksbsvs Sastry, 'Dry Sliding Wear Characteristics of Sintered Preform Al-Cr3C2 Metal Matrix Composites' Annales de Chimie - Science des Matériaux, 49(5), 515-522, Oct. 2025, (WOS) https://doi.org/10.18280/acsm.490507
- Balaji Naiak Mudavath, Srinivas Chandanam, 'Heat Transfer Analysis of MFC Nano Coolant Blends Comparison in Compact Heat Exchanger', Revue des Composites et des Matériaux Avancés, 35(2), 971-979, Oct. 2025, (WOS) https://doi.org/10.18280/rcma.350516.
- Chittaranjan Das V, Praveen Kumar K, Sai Pranay U, Rama Sreekanth P.S, ''Improving the Thermal Properties of Ultra High Molecular Weight Polyethylene with Carbon Nanotube Reinforcement: An Innovative Strategy for Bone Knot Replacement Applications', Lecture Notes in Mechanical Engineering, Oct. 2025, https://doi.org/10.1007/978-981-96-7576-0_48
- Suresh Babu Graddala, V. Chittaranjan Das, 'The Surface Grain-Refined AZ31 Mg Alloy by Shot Peening: The Role of Processing Medium on Hardness, Wettability and Corrosion Properties', Canadian Metallurgical Quarterly The Canadian Journal of Metallurgy and Materials Science, Oct. 2025, (WOS) https://doi.org/10.1080/00084433.2025.2556611
- Kota S, Anantha R, Sajja R, ''Multicomponent Nanofibrous Electrospun Dressings, Evaluated for the Healing of Full-Thickness Excision Wounds in a Porcine Model', 3 Biotech, 15 (335), Sep. 2025, (SCI) https://doi.org/10.1007/s13205-025-04460-w
- Sneha H Dhoria, K. Venkata Subbaiah, V. Durga Prasada Rao, 'An Experimental Study on Multi-Criteria Parameters Optimization of Process for Al6351/SiC/Gr

Metal Matrix Composites Using AHP-TOPSIS Approach', Journal of Polymers and Composites, 13 Aug. 2025.

- M. R. Kamesh, P. Suresh Kumar, A. Vijayalakshmi, Shakti Dubey, P. Madhu, C. Sowmya Dhanalakshmi, A. Vadivel, Ajay Singh Yadav H, N. Subramani, 'Interaction Between Sewage Sludge and Biomass Components for Enhanced Biofuel Production Via Pyrolysis Based on Studies of the Mild Acid Pre-Treatment Process', Journal of the Energy Institute, 121, Aug. 2025, (SCI) https://doi.org/10.1016/j.joei.2025.102167
- Sivasankara Raju Rallabandi1 Â, Srinivasa Rao Gunji2 Â, M. Girish Prasad3 D. Kondala Rao2 Â, Apparao Damarasingu1 Â, Azad Duppala1 Ramakrishna Bondala1, 'Development and Optimization of AlSi/CSA/MoS2 Composites for Superior Tribology'Corrosion Resistance Using FCC Approach', Journal of Bio- and Tribo-Corrosion, July 2025, https://10.1007/s40735-025-01012-w
- Madhavi Latha Pandala, B Vishnu Varshan, K Snehith, Y Sumanth, Kancharla Praveen Kumar, Gn Sowjanya, 'Real-Time Respiratory Sound Classification For Remote Diagnostic Systems Utilizing Deep Learning And Spectrum Analysis', Journal of Theoretical and Applied Information Technology, 103 (13), 4676-4690, July 2025.
- Rajavarapu Rambabu, Sai Sarath Kruthiventi, P. Mastanvali, M. Rajesh, V. Khageswar and G.Kishore Chowdari, 'Experimental analysis of Palmyra Biodiesel Performance in Diesel Engine with Varied Injection Timing', International Journal of Vehicle Structures & Systems, 17(2), 224-227, July 2025. (Scopus) https://doi.org/10.4273/ijvss.17.2.07
- Venkata Sushma Chinta, P. Kiran Kumar, K. Lakshmi Chaitanya, S. Narasimha Kumar, K. Venkata Vidhya Sagar, 'Impact Strength Analysis of Glass-Jute Hybrid Composites: Experimental and FEA Investigation', SSRG International Journal of Mechanical Engineering, Volume: 12, Issue: 7, July 2025, (WOS) https://doi.org//10.14445/23488360/IJME-V12I7P105

Achievements

- J. Purushottam Karthik, Ch. Devaraj, J. Ranga Raya Chowdary, A. Muddu, 'Improving the Quality of Engineering Teachers', conducted by AICTE- INAE-INFOSYS Foundation Centre for Engineering Education Excellence Program both offline/online from (May - Dec -2025), IIT Khargapur & IIT Madras.

NPTEL Certification Courses Completed

- Y.N.V. Sairam and K. Hari Prasad successfully completed the SWAYAM-NPTEL Domain Certification in Data Science, October 2025.

Workshops/FDP's Attended

- C. Tarasasanka, K. Lakshmi Chaitanya, D. Swapna, Online FDP, Interdisciplinary Manufacturing Process Advances and Characterization Techniques', Department of Mechanical Engineering, Jain College of Engineering and Technology, Belgavi 22-26, Jul. 2025.
- C. Tarasasanka, Sneha H Dhoria, FDP on 'Sustainable Materials and Advanced Manufacturing Practices', Department of Automobile Engineering, Vallarupalli Nageswara Rao Vignana Jyothi Institute of Engineering and Technology, Hyderabad 22-26, Sep. 2025.
- R. Sreenivasulu, P. Suresh Kumar, DST-ANRF Sponsored Five-Day Online Workshop 'Advanced Materials and Manufacturing: Characterization and Applications', Department of Mechanical Engineering, National Institute of Technology Karnataka, Surathkal 22-26, Sep. 2025.
- K. Praveen, V. Ramakoteswara Rao, D. Swapna, Mohammad Hasheer Shaik, Y. N. V. Sairam, J. P. Karthik, AICTE Training And Learning (ATAL) Academy Faculty Development Program 'Mechanical Engineering for Modern World (Next-Gen Mechanical Engineering Technologies)', Department of Mechanical Engineering, QIS College of Engineering & Technology, 03-08, Nov. 2025.
- K. Bala Prasad, FDP 'Emerging Technologies in Mechanical Engineering towards Sustainability', Annamacharya University, Rajampet, Annamacharya, A.P., during 03-08 Nov. 2025.

Ph.D Awarded Under Faculty Guidance

- Under the guidance of Dr. D. V. V. Krishna Prasad, Professor and Head of the Department of Mechanical Engineering, RVR&JC CE, Ph.D. degree was awarded to B. N. V. Srinivas in the month of September 2025 from ANU, with the title of the thesis as 'An Experimental Investigation on Development of Aluminium Composites with Metal-Based Reinforcement by Powder Metallurgy Route'.

Industrial Tour

The Mechanical Engineering Department organized a short industrial visit for students to the following industries:

- The IV/IV B.Tech (A & B Sections) students visited Jindal Urban Waste Management on 30–31 July 2025.
- The III/IV B.Tech (A & B Sections) students visited Kusalava International and GS Alloy Castings Limited on 03–04 September 2025.
- The II/IV B.Tech (A & B Sections) students visited Sangam Milk Producer Company Limited and Sri Lakshmi Ganapathi Engineering Works on 06 and 11 September 2025.