Association of Indian Universities

Sri Balaji Vidyapeeth

Academic & Administrative Development Center

(AIU-SBVDU AADC)

Brief Report on

"Harnessing Artificial Intelligence for Academic excellence and Research Innovation"

JANUARY- 2026

Harnessing Artificial Intelligence for Academic Excellence and Research Innovation

Faculty Development Program Chairperson:
Prof. S. Shanmuganathan Principal, School of Pharmacy, SBV.

Nodal Officer:
Dr. Shivasakthy Manivasakan, Director, IHPE, Sri Baaji Vidyapeeth

The Association of Indian Universities – Sri Balaji Vidyapeeth (Deemed to be University), Academic and Administrative Development Centre (AIU–SBVDU AADC) successfully organized a Faculty Development Program on "Harnessing Artificial Intelligence for Academic Excellence and Research Innovation" from 5 th to 9th January 2026 through online mode. The program aimed to enhance the knowledge and skills of faculty members, researchers, and academic professionals in effectively integrating Artificial Intelligence (AI) into teaching, learning, research, and administration. It provided a valuable platform to explore AI tools, innovative practices, and data-driven approaches for academic excellence and institutional development.

The sessions were delivered by distinguished experts from reputed universities and industries, covering topics such as AI in research, augmented and virtual reality, data-driven decision-making, AI literacy, and institutional quality assurance. Each session offered practical insights to help participants adapt to the evolving digital academic environment. This FDP reflected AIU–SBVDU AADC's vision to build future-ready educators and administrators, promoting ethical and inclusive adoption of AI in higher education.

Objectives of the workshop:
At the end of the FDP, participants will be able to:

- ➢ To examine the role of AI in advancing teaching and learning
- ➢ To enhance research capacity and productivity through AI
- ➢ To build digital and AI literacy among academicians
- ➢ To foster innovation and interdisciplinary collaboration
- ➢ To ensure ethical transparent and responsible use of AI in academia
- ➢ To evaluate the impact of AI adoption on academic excellence
- ➢ AI can be harnessed to advance pharmacy research by improving drug discovery

Introduction to AI in Education - Dr. Murugan

Dr. Murugan Assistant professor NIT, Silchar presented an overview of the role of Artificial Intelligence (AI) in education and its alignment with India's AI mission and emerging job opportunities. He introduced AI as a scientific field focused on developing intelligent machines capable of learning and decision-making. The session covered how AI systems analyze data such as text, images, and videos using neural networks and deep learning, enabled by advances in hardware, cloud computing, and natural language processing. Murugan discussed key AI applications, including Generative AI and Conversational AI, highlighting tools like ChatGPT. He emphasized AI's potential to enhance educational accessibility through personalized and adaptive learning, while supporting tasks such as problem-solving, literature review, and research writing. The talk also addressed ethical concerns, the importance of algorithmic understanding, and the need for educators to use AI responsibly and effectively.

AI in Student Support and Career Guidance -Dr. Tamil Kodi

Dr. Tamilkodi Professor Global University ,Rajamundry session focused on the application of AI tools in education, particularly for student support, career guidance, and teaching enhancement. She explained how AI systems such as ChatGPT can provide personalized academic assistance, career counselling, intelligent tutoring, and early warning support through data-driven recommendations. The session highlighted the importance of prompt engineering, demonstrating how clearly defined prompts improve the quality and relevance of AI-generated responses, with examples from career guidance and meal planning. Dr. Tamilkodi also introduced other AI tools, including Gemini AI, Khan Academy, and Notebook LM, showcasing their use in creating lesson plans, quizzes, newsletters, and supporting research writing. She emphasized how these tools can reduce faculty workload, improve student monitoring, and streamline educational processes. The session concluded with a discussion on ethical AI use, human oversight, and participant engagement through feedback collection.

AI for Grading and Assessment Automation - Mr. Sriram. R

Mr. Sriram Head Department of Information Technology C Dreams, delivered a presentation on the evolution of grading and assessment systems, tracing the shift from paper-based evaluation to computer-based testing and AI-powered automated grading. He highlighted the limitations of manual grading, including time consumption, subjectivity, and inconsistency, and explained how AI-based systems address these challenges through efficiency, consistency, scalability, and immediate feedback. The session described how AI grading systems use technologies such as natural language processing, machine learning, and computer vision to assess multiple-choice and

short-answer responses. Sriram also discussed system components, implementation processes, and benefits such as personalized feedback, gamification, and data-driven insights. He addressed challenges related to accuracy, bias, and security, emphasizing human-in-the-loop verification and ethical deployment to improve learning outcomes and faculty efficiency.

Generative AI in Healthcare – Dr.S. Prabhu

Dr. Prabu Professor, Pondicherry University a distinguished expert in computer science and engineering, who delivered an insightful lecture on generative AI in healthcare systems. He traced the evolution of artificial intelligence from its origins in 1956 to its current applications, explaining its relationship with machine learning and deep learning. The talk covered supervised, unsupervised, and reinforcement learning models, supported by healthcare examples such as patient appointment prediction and disease clustering. Dr. Prabu explained artificial neural networks and highlighted the role of generative AI in handling unstructured data and creating new content. He discussed healthcare applications including medical imaging, research summarization, and patient assistance enabled by large language models. The session concluded with a discussion on ethical, privacy, and regulatory challenges, emphasizing responsible and patient-centered AI innovation.

AI Doctor BOT - Mr. Bharat Solanki

Mr. Bharat Solanki founder AI Sante Meditech Pvt.Ltd. presented the AI Doctor BOT, an intelligent health assistance tool aimed at addressing the shortage of healthcare professionals and providing 24/7 patient support. He explained that the BOT can analyse symptoms, send medication reminders, manage health records, and offer quick preliminary medical guidance, making healthcare more accessible and cost-effective, particularly in remote areas. Bharat emphasized that AI cannot replace doctors but can enhance their efficiency by reducing workload and improving patient engagement. He also discussed limitations such as dependence on data quality and privacy concerns, which are mitigated using blockchain technology. He concluded that the AI Doctor Bot could significantly improve healthcare practices in India, with a nationwide launch planned within six months.

Artificial Intelligence and the Fourth Industrial Revolution: Redefining the Future of   Pharma Healthcare -Dr. Puneet Gupta

Dr. Puneet Gupta Assistant Professor Amity University Noida, emphasized AI's impact on drug discovery, personalized medicine, manufacturing optimization, and hospital pharmacy systems, showcasing how Industry 4.0 technologies significantly reduce time, cost, and manpower.

Discussions stressed bridging the gap between academia and industry by integrating AI tools, real-world case studies, and continuous manufacturing concepts into curricula. Education 4.0 was presented as a flexible, technology-driven approach enabling virtual learning, automated assessment, and industry exposure. Overall, the program underscored the need to equip students and faculty with AI-driven skills to meet future workforce and healthcare demands.

AI in Data Analysis for Academic Research - Dr. Ram Kumar Sahu

Dr. Ram Kumar Sahu, Associate Professor, Department of Pharmaceutical Sciences, Srinagar an accomplished academician with extensive experience in teaching, research, patents, and PhD supervision. He delivered an insightful lecture on the role of artificial intelligence in data analysis for academic research, highlighting its ability to automate repetitive tasks, analyze large datasets, and improve accuracy in predictive modeling and image analysis. The talk covered key AI concepts such as machine learning and deep learning, along with essential tools including Python, R, SPSS, MATLAB, and open-source libraries. Dr. Sahu also discussed AI tools for literature review, experiment management, and interdisciplinary research, emphasizing the need for careful validation of AI-generated results.

Natural Language Processing (NLP) in Research   - Dr. Rahul Kumar Chawda

Dr. Rahul Kumar Chawda, Assistant Professor at Assam University, Silchar. He highlighted the growing importance of Natural Language Processing (NLP) for analysing large volumes of text data across disciplines, sharing practical insights from his experience of analysing thousands of research papers using NLP tools. The session provided a clear roadmap for integrating NLP into research workflows, covering applications such as automatic literature reviews, social media analysis, text mining, and topic modelling. Dr. Chawda explained the NLP pipeline, key tools like NLTK, SpaCy, and Hugging Face Transformers, and emphasized ethical considerations including bias, data privacy, and validation of AI-generated outputs.

AI for Hypothesis testing and Model Evaluation - Dr. Gopal Sivakumar,

Dr. Gopal Sivakumar CEO Vision Excellence focused on hypothesis testing, data quality, and model evaluation, with emphasis on their applications in research and industry. He explained the concepts of null and alternate hypotheses, p-values, and the importance of accurate measurement systems for reliable data. The session clearly differentiated hypothesis testing from Design of Experiments (DOE), highlighting that hypothesis testing examines one factor at a time, while DOE evaluates multiple factors and their interactions. Key DOE principles such as replication, randomization, and blocking were discussed to minimize bias and noise. Dr. Sivakumar also

compared DOE with AI-based analysis, noting that while AI can analyze historical data, researchers remain accountable for interpreting and validating results.

Translational AI: Turning Research into Real world Impact - Mr. Girish Somvanshi

Mr. Girish Somvanshi Vice President extensive experience in translating academic research into real-world healthcare impact through AI, med tech, and pharmaceutical innovation. He emphasized that while academic novelty is important, true value lies in usability, reliability, regulatory readiness, and societal benefit. Girish discussed frameworks for moving research from labs to markets, including stakeholder alignment, sustainability models, and ethical commercialization without compromising academic freedom. A major focus was placed on ethical AI use in research, addressing risks such as AI-generated hallucinations, fake citations, plagiarism, and excessive self-citation. The discussion stressed transparency, proper disclosure of AI assistance, adherence to authorship and IP guidelines, and human oversight. Participants were encouraged to use AI responsibly as an assistive tool while preserving academic integrity, originality, and trust in scholarly work.

AI for Plagiarism Detection and Academic Integrity - Dr. S. Abimanyu

Dr. Abimanyu, Assistant Professor at Assam University, Silchar, presented a session focused on preserving academic integrity in the age of Artificial Intelligence. The report highlighted the core principles of ethics, honesty, and transparency in research and academic writing. Dr. Abimanyu discussed how AI tools can pose risks to integrity through fabricated citations, inappropriate paraphrasing, and AI-generated content. He addressed responsible self-citation practices, authorship ethics, conflict-of-interest disclosure, and plagiarism concerns. The session also examined the role of Generative AI and Large Language Models, noting both their benefits and limitations. AI plagiarism detection tools were reviewed, emphasizing that while helpful, they are not foolproof. Dr.Abimanyu concluded by stressing the importance of human oversight and responsible AI use to maintain academic credibility.

Bridging Physics and Machine intelligence: Next -GEN AL .ML workflows for transforming Drug Discovery – Dr. Vinod Devaraji

Dr. Vinod Devaraji Senoir Scientist Schrodinger, Bengaluru presented an insightful session on the role of Artificial Intelligence in modern drug discovery, drawing on his expertise in computational chemistry and AI-driven molecular design. He explained the integration of AI with physics-based modeling and clarified key concepts such as artificial intelligence, machine learning, deep

learning, and learning paradigms including supervised, unsupervised, and reinforcement learning. Dr. Vinod discussed advanced techniques such as AutoQSAR, deep learning models, and active learning approaches like AL-Glide. Through a case study on MALT1 protease inhibition, he demonstrated how AI-enabled methods can accelerate lead optimization, reduce computational costs, and shorten discovery timelines, highlighting the importance of multidisciplinary skills in contemporary pharmaceutical.

The Role of AI in shaping the future of Education - Dr.Sayak Das

Dr. Sayak Das Assistant Professor, Assam University, Silchar delivered an insightful session on "AI in Education: Future Perspectives," focusing on the transformative role of artificial intelligence in teaching, learning, and academic research. He highlighted AI as a driving force of the next educational era, emphasizing interactive learning, innovation, and the development of an AI-native workforce. The session explored various AI tools and technologies, including machine learning models, data encryption, and virtual reality, and their potential to enhance educational outcomes. Dr. Sayak Das also addressed ethical considerations, data accuracy, and the importance of proper data curation in educational AI applications.

Artificial Intelligence in Pharma R&D: Tools trends and Translation- Dr.P. Selvamani

Dr. P. Selvamani Professor &HOD, Anna University, Trichy emphasized key AI domains— machine learning, deep learning, natural language processing, and predictive analytics—and their integration across the pharmaceutical lifecycle. Applications discussed included protein structure prediction using AlphaFold, generative AI for molecular design, virtual screening, digital twins for ethical preclinical testing, and AI-driven clinical trial optimization. The session also addressed challenges such as data quality, security, and algorithm bias, stressing interdisciplinary collaboration. Participants were encouraged to leverage emerging AI opportunities, contribute feedback, and engage in future collaborations to advance personalized and precision medicine.

The Researchers New Toolkit: AI for Data Science and literature review – Dr. Prakash

Dr. Prakash founder and CEO of A2Z.4. delivered the concluding session of the Faculty Development Program, focusing on academic writing challenges and the effective use of AI tools in research. He emphasized experiential learning, professional growth, and adapting to emerging technologies to address issues such as information overload, cognitive fatigue, and manuscript preparation. The session covered AI-assisted tools for literature review, manuscript writing, data

analysis, reference management, and source evaluation, highlighting platforms like ChatGPT, Perplexity AI, and Mendeley. Dr. Prakash stressed academic integrity, verification of AI-generated content, and the use of high-impact journals. Practical demonstrations included article analysis, mind mapping, data visualization, and graphical abstract creation. Participants were encouraged to upgrade skills, collaborate interdisciplinarily, and provide feedback.

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Dr. Shivasakthy Manivasakan

Nodal officer

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