Report
Leveraging Fabric Digitization and 3D Material Creation Using AI-Powered Technology for Business Growth

Date: 20th January 2024

Introduction:
The webinar organised by NISTI on 20th January 2024 explored the revolutionary impact of AI-driven 3D digital fabric material creation on the textile industry. Dr. Vijay Gotmare, a distinguished retired professor with extensive experience in textile education and research, served as the keynote speaker, sharing insights on the transformative potential of AI in the textile sector.

Agenda and Participants:
Dr. Vinod Shanbhag, Immediate Past Chairman, NISTI, began the session with a sombre note, announcing the passing of Ms. Rebecca Price, Executive Director of the Textile Institute, who had been fighting cancer. Two minute of silence praying eternal peace for the bereaved soul of Ms. Rebecca Price was observed. Dr. RA Lal, Chairman NISTI, then introduced the agenda, including a presentation by Dr. Vijay Gotmare, expert comments, and a Q&A session. Dr. Vijay Yadav, Hon Secy NISTI, discussed the growth of NISTI, its mission, and its role as a technology think tank for the textile industry.

Keynote Presentation by Dr. Vijay Gotmare:
Dr. Gotmare discussed the transformation of the textile industry through AI-driven 3D digital fabric material creation, emphasizing efficiency, creativity, and business growth. He addressed challenges in the textile and fashion industry, advocating for digitization and the adoption of new technologies. Dr. Gotmare highlighted the potential of 3D printing, radio frequency identification, and competitor vision in overcoming industry challenges.

Digital Technology in the Fashion Industry:
Dr. Gotmare emphasized the role of digital technology in the fashion industry, showcasing software like Competitor Design and the need for AI applications in creating 3D versions of 2D designs. He detailed the application of AI in improving product efficiency, reducing waste, and optimizing manufacturing processes.

Virtual and Augmented Reality in Textile Industry:
The speaker discussed the benefits of virtual and augmented reality in the textile industry, proposing digital fabric sampling as a solution to current challenges. He noted the trend of digitizing physical fabric switches for 3D design prototyping and e-commerce, reducing lead time and fostering innovation.

Digitization of Materials Post-Pandemic:
Dr. Gotmare explained the digitization of materials post-pandemic, emphasizing the use of AI cloud technology for creating 3D ready digital materials. He highlighted the

benefits, including reduced time and effort, efficient workflows, and improved global collaboration. The implementation of a fabric digitalization system, reducing sourcing time from 3-5 months to 3 days, was discussed, certified by a Swiss-based environmental sustainability consultancy.

Expert Comments and Discussions:
Professor Dr. Kushal Sen, NISTI's Executive Member, provided expert comments on the importance of digitization, challenges in feedback understanding, and the potential of AI in fabric and yarn making. Discussions emphasized the interaction between material, machine, and system for successful outcomes.

Industry Impact and Education:
Discussions included the potential impact of AI on employment in the fashion industry, with Dr. Gotmare highlighting the rarity of AI technology in the Indian market. Emphasis was placed on the importance of students learning and adapting to these technologies.

Conclusion and Acknowledgments:
Dr. Gotmare proposed organizing demos for interested parties to understand their work better, concluding the webinar. Mr. AN Bajpai, Jt. Secy, NISTI, delivered a Vote of Thanks. Webinar proceedings are available on the NISTI YouTube channel at https://youtu.be/uqk7fUNFNQ8, and viewers are encouraged to subscribe and like the video.

Key Reflections:
The webinar provided a comprehensive overview of the potential of AI in the textile industry, addressing challenges and emphasizing the need for innovation, sustainability, and skill development. The legacy of Ms. Rebecca Price was acknowledged, and the contributions of all participants were integral to the success of the event.