Centre for Machine Learning and Intelligence
Skill Based Elective
Artificial Intelligence for Home Science
(Applicable for the UG Students admitted from 2023 – 2024 onwards)

Semester: 3
Subject Code : 23BAISE1

Hours of Instruction / Week: 4
No of Credits: 2

Course Objectives:
     1. To know about the basics of Artificial Intelligence.
     2. To become familiar in working with 3D designing tools.
     3. To learn about the use of AI powered designing tools.

Introduction of AI in Computer graphics - 20 Hrs

Definition of AI, Application of AI in Textiles Industry, Food Industry, Health Care, etc,.Why AI is important, Advantages of AI, Types of AI. Overview on Deep Learning, NLP, BigData, Data Science. Supervised Learning - semi-supervised Learning - Unsupervised Learning,Decision trees, Neural Network, Basic and advanced clustering techniques, dimensionalityreduction. About Computer Graphics, Application of Computer Graphics, 2D Viewing, 3DGraphics, 3D Transformation, Difference between 2D and 3D, about 3D Modeling, AI inComputer Graphics, AI integrated Interior designing Tool, AI integrated for Fashion designing
Tool.

Implementation -40 Hrs
I. AI Powered Interior Designing Tool
     1. Design the outline map for the Home
     2. Add Additional Partition for the Home Design
     3. Design the Home Interior (hall, study room, bedroom)
     4. Design the Kitchen Interior for the Home
     5. Design the Home Exterior look

II. AI integrated Fashion Designing Tool
     1. Design a Fashion Top for Women wear
     2. Design a Shirt for Menswear
     3. Design Jumpsuits for Women wear
     4. Design a Pant for Women wear
     5. Design a T-Shirt for Menswear

Total Hours: 60

Reference Books:

1. Stephen Pentak, Richard Roth, (2012), *"Design Basics: 2D and 3D"*, Cengage Learning;8th edition, ISBN-13: 978-0495909972.
2. Richard Roth, Stephen Pentak, (2012), *"Design Basics: 3D"*, Cengage Learning; 8th edition, ISBN-13: 978-0495915782.

Reference Website Links:

1. https://browzwear.com/vstitcher-first-steps/
2. https://support.planner5d.com/en/support/solutions/folders/36000220164
3. https://www.youtube.com/watch?v=pElbP7jBIW0
4. https://www.instructables.com/Draw-a-Floor-Plan-of-a-Room-or-House/
5. https://www.youtube.com/watch?v=3atS6PftD0U

Course Outcomes:

CO 1: Get familiar with AI Applications in other platforms.
CO 2: Get familiar with AI Algorithms.
CO 3: Knowledge on Computer Graphics - 2D & 3D.
CO 4: Working with AI integrated 3D interior designing tool.
CO 5: Working with AI integrated 3D fashion designing tool.