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(57) Abstract :  
 A digital transformation matrix simulator (100) includes an interactive screen (101), matrix input module (102), and vector transformation engine (104) for real-time visualization of linear algebra concepts. The system dynamically displays transformed vectors, overlays eigenvectors via highlighter (105), and enables space distortion through a basis grid module (106). Matrix inputs are adjusted using sliders (107), and animations provide continuous feedback. The device enhances comprehension of matrix operations through intuitive interaction, animation, and modular display integration.

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