Highlights

- A novel AI-based system is proposed for the automatic generation of architectural floor plans.

- The model integrates Convolutional Neural Networks (CNNs) and classification algorithms.

- A hybrid architecture combining deep learning and traditional machine learning is developed.

- The system is trained on a publicly available dataset of 15,000 floor plans across 28 categories.

- The proposed approach aims to accelerate and inspire the architectural design process.

- This work fills a gap in current research by focusing specifically on floor plan generation using AI.