

# VOICE CAD: Revolutionizing 3D Modeling Through Voice Commands

Prof. Vaibhav Sawalkar<sup>1</sup>, Abhijit Patare<sup>2</sup>, Ayush Gorlawar<sup>3</sup>, Aditya Shreyaskar<sup>4</sup>

Professor, Department of Computer Science & Engineering<sup>1</sup>

Students, Department of Computer Science & Engineering<sup>2,3,4</sup>

MIT ADT (Arts Design & Technology), Loni Kalbhor, Pune, India

**Abstract:** *Designing 3D models traditionally requires a combination of technical expertise, specialized software, and significant time investment. These challenges limit the accessibility of 3D design tools to professionals with the necessary skills. VOICE CAD aims to simplify the design process by providing a voice-driven 3D modeling system. This system leverages advanced Natural Language Processing (NLP) and voice recognition technologies to interpret user commands, allowing them to create and manipulate 3D models with ease. This paper discusses the architecture, functionality, implementation, and outcomes of VOICE CAD, emphasizing its ability to democratize access to 3D design tools. We present the results of system evaluation, highlighting its command recognition accuracy and usability across both technical and non-technical users.*

**Keywords:** Voice CAD, Natural Language Processing (NLP), Speech Recognition, 3D Modeling, Real-Time Rendering, User Interface, Accessibility, Artificial Intelligence