

Robots as Furniture

Designing a Seamless Human-Computer Interface with Table Bot Robotics

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This project delves into reimagining the integration of technology into everyday living through the innovative use of robotic furniture. Focusing on the Table Bot robotic furniture platform (TBO), we aimed to create a compelling piece of furniture that seamlessly blends functionality with aesthetics. Leveraging materials and machinery from the Brown Design Workshop, we developed a form language that elevates TBO into more than just a utilitarian object. Our exploration included the development of a web-based robotic platform, allowing for remote control functionality and paving the way for further feature enhancements. Integration of AI and natural language processing provided intuitive control interfaces, with options ranging from auditory devices to touch-sensitive pads directly embedded in the tabletop. Visual interfaces, facilitated by screens and projectors, aimed to create a more human-centric interaction experience. User testing across campus provided valuable insights, guiding our iterative design process. Our project not only redefines the relationship between humans and technology, but also fosters collaborative innovation at the intersection of design and engineering. Looking ahead, our future endeavors will delve deeper into sound localization, with a focus on detecting and analyzing target sounds to enhance TBO's spatial awareness and functionality.