Upper Arm Rehabilitation Device
Team 25
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Neurological damage resulting in motor impairments requires rehabilitation to regain motor capacity. Machines to aid physical therapists in monitoring and providing resistance rehabilitation, which operate on a plane and focus on the upper arm and shoulder, exist and can result in improved rehabilitation times [1]. However, these machines are typically bulky and expensive, and therefore their use is restricted to rehab centers. Our team seeks to design a portable, inexpensive device that can be used by patients in their own homes. The machine will restrict movement to a 2-D plane and will allow for programmable resistance. Ultimately, the machine will have the capability to communicate with a computer to allow for data collection and a graphical display to enable the patient to play games with the device. An improved patient experience will encourage machine usage and could decrease rehabilitation time.