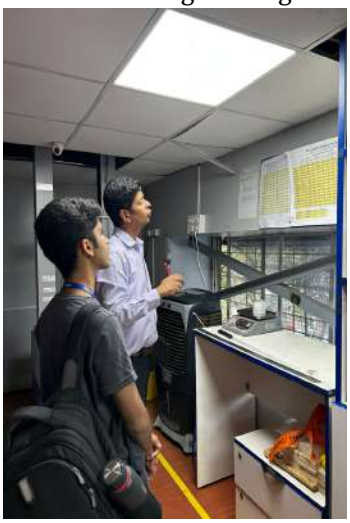
Observerships

Multitech Products Pvt. Ltd.

During my observership at Multitech Products Pvt. Ltd., I had the opportunity to explore the manufacturing processes behind industrial packaging solutions. I observed how different materials and technologies are used to create packaging that meets international standards, ensuring both durability and efficiency. The facility in Pune was equipped with advanced machinery, and I learned about the precision required in designing packaging for various industries, as well as how important often overlooked fields/niches were in the grand scheme of things. The visit provided insight into how engineering and management intersect to optimize production while maintaining quality and sustainability.

Interacting with the experienced engineers and management professionals at Multitech highlighted the critical role of innovation in industrial packaging. I gained a better understanding of how companies must balance cost-effectiveness with performance to meet customer demands. Seeing the production workflow firsthand helped me appreciate the complexity of large-scale manufacturing, from material selection to final quality checks. This experience reinforced the importance of attention to detail and process efficiency in industrial engineering.



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Observerships

Overserverships as a part of the FIRST Tech Challenge

Jendamark, ODIN Manufacturing, and Eepos Cranes

As part of my FTC team's journey into understanding robotics and its practical applications, I had the opportunity to observe the inner workings of Jendamark, ODIN Manufacturing, and Eepos Cranes by visiting their combined factory. During the visit, I got to see real-world applications of robots in action, particularly in the design and manufacturing of Jendamark's automobile assembly lines. This hands-on experience gave me a unique perspective on how robots are integrated into production processes to increase efficiency and precision, changing my understanding of what 'robotics' actually was. Additionally, we were given a highly detailed presentation exploring the implications of electric vehicles and how the automotive industry is adapting its manufacturing strategies to accommodate this growing trend.

Another key experience was testing ODIN's augmented and virtual reality (AR/VR) systems, that were meant to be used in an industrial setting, allowing me to understand how these cutting-edge technologies could be applied to streamline operations and improve training efficiency while reducing costs.

Beyond the technical exposure, I gained valuable insights into the design cycle, specifically getting to visit their ideation labs and understand how products were brainstormed and then made into real, tangible products.





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Observerships

Kokilaben and Saifee Hospital

Another key experience was getting to visit Kokilaben Hospital and Saifee Hospital, where we got to see medically assistive robots such as the Lokomat and da Vinci Surgical System in action. We even got to test the da Vinci Surgical System (on a silicone testing model).

Observing these technologies firsthand gave us a deeper understanding of how robotics are transforming patient care and medical procedures. The Lokomat demonstrated how automated gait training can aid in neurorehabilitation, providing consistent and controlled movement for patients recovering from neurological injuries. The da Vinci Surgical System showcased the precision and control that robotic-assisted surgery offers, minimizing invasiveness and improving surgical outcomes. Seeing these innovations in use reinforced the importance of technology in modern medicine and how it continues to enhance both patient recovery and surgical efficiency.

(The picture below is from Saifee Hospital. We weren't allowed to take pictures at Kokilaben Hospital.)