Introducing Team Armstrong's Low-Cost Myoelectric Prosthetic Arm

Our team, Armstrong, has developed a hardware-based solution designed to address a significant gap in the prosthetics market: affordability. We've created a low-cost myoelectric prosthetic arm, a device that can help restore mobility and independence to those who need it most.

What is Myoelectric Technology?

Myoelectric technology utilizes the electrical signals generated by our muscles. These signals are detected and translated into movement, allowing users to control the prosthetic with their natural muscle activity. This advanced technology offers a more intuitive and responsive experience for users.

Why is This Project Needed?

The need for affordable prosthetics is urgent. Shockingly, 80% of those requiring prosthetics are from rural areas, often belonging to economically weaker sections of society. Almost half of these individuals do not wear prosthetics simply because they cannot afford them. Current prosthetic options range between ₹80,000 and ₹5-6 lakhs, making them inaccessible for the majority.

This is where our project comes in. We aim to provide a fully functional prosthetic arm at a fraction of the cost, making this life-changing technology available to those who need it the most. Our solution not only restores mobility but also empowers individuals to regain their independence.

Prototype Demonstration

Our current model is an initial prototype, designed to replicate the functionality of the final product. While this version uses computer vision to track hand motions, the final product will feature a myoelectric muscle sensor for even more precise control. We encourage you to experience the functionality firsthand and see how the technology works in action.

Looking Ahead

To take our prototype to the next level and develop a fully functional product, we require additional resources, including a 3D printer and specific hardware components. With these, we can move closer to making affordable prosthetic arms a reality for those who need them most.