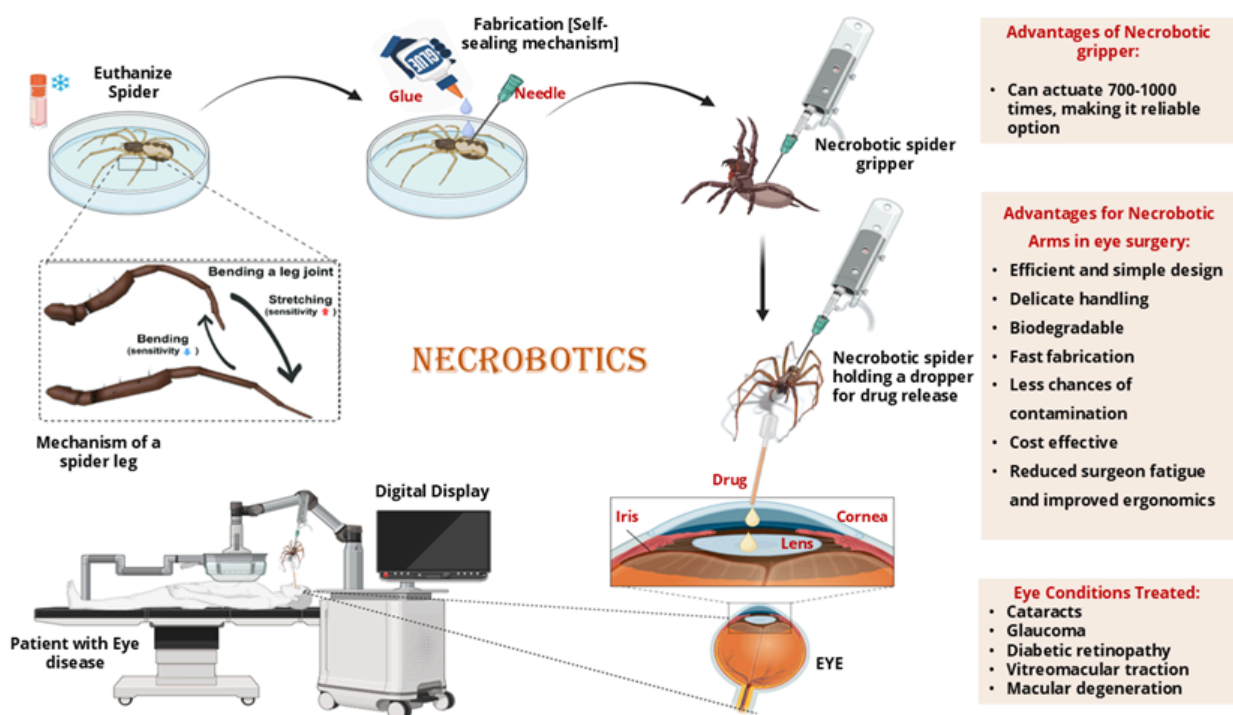


## Woxsen University to Announce Innovative Necrobotics Project for Eye Surgery at Web Summit 2024

Hyderabad, India – November 11, 2024 – [Woxsen University's AI Research Centre](#) will reveal a pioneering healthcare project on necrobotics at Web Summit 2024, held from November 11-14 in Lisbon, Portugal. The project introduces a revolutionary approach to eye surgery, combining advanced robotics with biological systems, utilizing necrobotic grippers derived from spider legs to enhance precision in delicate medical procedures.

The signature project, titled "Necrobotic-Based Surgical Treatment of Human Eye", demonstrates how biological components, particularly spider limbs, can be integrated into robotic systems to perform intricate tasks such as drug delivery and microsurgery. This innovative necrobotic technology has the potential to revolutionize ophthalmic procedures by offering surgeons unprecedented control and dexterity in treating complex eye conditions, including cataracts, glaucoma, and diabetic retinopathy.

Necrobotics represents a groundbreaking shift in medical robotics, leveraging the unique biomechanical properties of biological organisms to address challenges in surgical precision and patient care," said Dr. Raul Villamarin Rodriguez, Vice President of Woxsen University and Head of AI Research Centre" Our work in necrobotics is a step towards more sustainable, efficient, and cost-effective solutions in healthcare, and we're excited to introduce this at Web Summit 2024.



## **Figure 1. Proposed Framework for Necrobot based Eye Surgery**

### **Key Features of the Necrobotic-Based Eye Surgery Project:**

- **Precision and Dexterity:** The necrobotic gripper, crafted from spider legs, allows for controlled movements ideal for delicate eye surgeries, minimizing the risk of human error.
- **Cost-Effective Solution:** Compared to traditional robotic surgery tools, necrobotics provides a low-cost, biodegradable alternative without compromising efficiency.
- **Minimally Invasive Drug Delivery:** The gripper enables precise administration of drugs directly to affected areas in the eye, ensuring effective treatment with minimal invasion.
- **Sustainability:** The use of biodegradable biological materials reduces the environmental footprint of surgical tools and minimizes contamination risks.
- **Application in Ophthalmology:** The necrobotic system is designed to assist with intricate surgical procedures on sensitive areas of the eye. Its ability to handle precision tasks like drug delivery offers significant potential in treating common eye diseases and conditions.

### **Future Implications:**

As the field of necrobotics evolves, its integration with AI-driven systems could pave the way for enhanced automated surgical procedures, further reducing surgeon fatigue and increasing the overall precision and safety of complex surgeries. Woxsen University's AI Research Centre envisions expanding this technology beyond ophthalmology to include applications in neurosurgery and cardiovascular procedures.

### **About Woxsen University:**

Woxsen University, based in Hyderabad, India, is a leader in interdisciplinary education and research, especially in AI, robotics, and biotechnology. Its state-of-the-art AI Research Centre is committed to pushing the boundaries of technology to solve real-world problems and improve lives across the globe.

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