FACULTY SPOTLIGHT

4 Questions with *Ria Kanjilal*

Assistant Professor of Computer Engineering

Hometown: Kolkata, India

What brought you to the Cal Poly College of Engineering?

I was attracted to the institution's dedication to hands-on learning and its strong focus on practical, applied engineering education. The chance to work with enthusiastic students, participate in meaningful research and collaborate with industry partners was particularly appealing. Moreover, the College of Engineering's emphasis on innovation and sustainability aligned with my aspirations, as I am dedicated to making a meaningful impact in my field.

Tell me about your research interests and why you are passionate about this topic.

My academic and professional pursuits are dedicated to conducting impactful research that enhances quality of life. Specifically, my work centers on artificial intelligence and health informatics, with the goal of advancing health care and improving individual well-being. The development of low-cost, sensor-based systems embedded in smart devices supports health-care providers in monitoring patients' daily symptoms, empowering them to deliver optimal care. To contribute to the well-being of our aging population and those with chronic illnesses, I focus on investigating and comparing the effectiveness of data-driven approaches.

What is your favorite part of your job?

My favorite part of my job is teaching and seeing the curiosity and enthusiasm of my students as they learn new concepts and apply them to solve real-world problems. Guiding students through challenging material and watching their skills and confidence grow is incredibly rewarding. I enjoy fostering a supportive environment where students feel empowered to ask questions, experiment and develop their own ideas.

What do you want others to know about your research? Why is your topic important?

The U.S. population is aging, and studies show that one in three adults over 65 experiences a fall each year, making falls the leading cause of both fatal and nonfatal injuries in this age group. The economic impact is significant, with direct medical costs from falls reaching $30 billion annually. In this context, a simple wireless wristband embedded with human activity recognition and fall detection algorithms could provide continuous monitoring for individuals with chronic illnesses, potentially reducing the risk of prolonged, undetected falls. To support the well-being of our aging population, my research investigates and compares the potential of AI and machine learning applications in health-care environments.

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