

VIMAL CHANDER

BIOMEDICAL ENGINEER

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Vimal Chander
Vellore, India

Dear Sir/Madam,

I am writing to express my interest in a suitable research or engineering position in the areas of biomedical engineering, biomechanics, gait analysis, functional anthropometry, computer vision, and human movement modelling. I am currently pursuing my PhD in Biomedical Engineering at IIT Madras, with expected completion in June 2027, and I have professional research experience as a Senior Research Fellow at Christian Medical College and Hospital, India. My academic and research background has provided me with strong expertise in computational biomechanics, functional anthropometric measurement, machine learning, computer vision, computational neuroscience, and 3D human modelling.

During my research career, I have worked on multiple funded projects supported by national agencies including DBT, DRDO, and ISRO-HSFC. My work has involved computational neuroscience modelling for functional electrical stimulation, motion capture-based upper and lower limb kinematic and kinetic analysis, inverse dynamics, surface EMG analysis, and the development of reliable methods for measuring and predicting functional anthropometric parameters. I have also used tools such as COMSOL Multiphysics, Simpleware, ANSYS, 3D Slicer, Unity, Python, C#, MATLAB, HTC Vive, and IMU-based systems for simulation, analysis, and human movement assessment.

My current research interests are strongly aligned with human-centered design, biomechanical modelling, gait analysis, and assistive or rehabilitation technologies. I am particularly interested in applying anthropometric and biomechanical data to improve workplace design, tool design, postural support, functional ability assessment, and movement performance analysis. My experience in integrating range of motion, strength measurements, kinematics, kinetics, and computational models enables me to contribute effectively to interdisciplinary research and development projects.

I believe my combination of biomedical engineering knowledge, programming skills, simulation experience, and practical exposure to gait and anthropometric measurement systems makes me a strong candidate for roles involving research, product development, clinical biomechanics, human factors engineering, or rehabilitation technology. I am confident that I can contribute meaningfully to your organization through innovative research, technical problem-solving, and collaborative project execution.

Thank you for considering my application. I would welcome the opportunity to discuss how my experience and skills can contribute to your team.

Sincerely,

Vimal Chander