MAR BASELIOS
COLLEGE OF ENGINEERING AND TECHNOLOGY
AUTONOMOUS

Thiruvananthapuram - 695015

In-house Internship Proposal Form

Proposal No. (*for office use only*):   Date of Submission: 14-4-2023

1.	Name, Designation and Dept. of Faculty Mentor1, Mentor2 (if, available)	Dr. Premchand V P, Assistant Professor, Department of Mechanical Engineering.
2.	Title of the Proposal	Investigations on Gait Pattern recognition using Machine Learning
3.	Prospective Branch of the intern	Mechanical Engineering /Computer science and Engineering
3.	Brief Description of the Proposal: Gate pattern recognition has been extensively used in the training of patients with lower extremity dysfunction and the functional evaluation during rehabilitation. The study of similar kinematic patterns associated with different pathological structure still remains an interesting area of investigation. The objective of this study is to develop a gait recognition computer vision system using artificial intelligence (AI) and machine learning (ML) computing. This study aims to find an optimal ML algorithm using computer vision techniques and measure variables from lower limbs to classify gait patterns in healthy people. The purpose of this study is to determine the feasibility of computer vision and machine learning (ML) computing in discriminating different gait patterns associated with different lower limb dysfunctions. Proposed AI and machine learning techniques can be used design gait biometric systems and efficient computer vision systems for gait pattern recognition.	
4.	Estimated hours of Student activity: (Minimum 10 to 15 hrs)	30-40 hrs
5.	Proposed activity for the students:	
	1. Study different computer vision system and ML algorithms.	
	2. Capture the spatiotemporal gait data from different healthy individuals(subjects).	
	3. Classify gait patterns using different classification techniques.	
	4. Evaluate the performance of different ML techniques for gait pattern recognition.	
6.	Expected outcomes	
	Propose an efficient ML technique for gait pattern recognition using an effective computer vision system.	

Name and Signature of Faculty Mentor(s): Dr Premchand V. P   *(signature)*

Recommendations:

18.4.23 Dr. Vinod V
Dept. Internship Coordinator
(Name and Signature)

18/4/23
Head of the Department
(Signature)