High Performance Biomechanical Modeling Utilizing Wearables Data

The Company:
Topodium Group is an international innovation and marketing agency with offices in Denver, UK, South Africa, Middle East and Asia. Our operations are diverse, and support multiple divisions within the company. This particular project is a joint venture between Topodium and other investors including high profile international athletes, industry leading manufacturers and subject matter experts.

The joint venture is focused on creating a wearables ecosystem which will support high performance biomechanical models, and transform them into world class user experiences. The first market we are targeting is the global soccer market, specifically goalkeeping. We have designed custom wearable devices to be affixed to athletes in unique ways. These unique designs will provide insights into high performance movements like never before. This will be a very high profile international product featured in top leagues around the world with high levels of media exposure.

The Project:
Collaborate with our team to strategize and design a robust data architecture, modeling, and processing methods to extract data from our wearable devices and create meaningful high performance biomechanical profiles. We will be building a custom admin portal which will be at the heart of our model classification and training process.

The Team: Our ideal team size would be 3-5 students.
We are looking for CS students with expertise in various methods of machine learning, data modeling, and system design.
An interest in human biomechanical modeling, and commercial products is a plus.

The team will be treated as subject matter experts, responsible for leading our team's design choices regarding our core data model and all related matters.

This team will report directly to the Director of Operations and Chief Innovation Officer, but will have the chance to work alongside our hardware, architecture and design experts.

The students will be working on campus with occasional field studies conducted within the Denver area. Students will be provided with any tools deemed necessary. If it is determined that an office space will be beneficial for the project we will acquire one. .

A contractual agreement assigning IP rights to the company will be required as part of this opportunity.

Future:
Topodium Group is currently exploring an opportunity focused around the commercial application of multiple machine vision models derived from EU funded research projects.