

INTERNSHIP OFFER

-

Strategy for the integration of Visual Computing for the analysis of sports movement and posture.

- **CONTRACT** : Master II internship
- **DURATION** : 6 months
- **LOCATION** : B'twin Village - 4 rue du professeur Langevin - 59000 LILLE
- **WORKING TIME** : Full time
- **EXPERIENCE** : Indifferent
- **LEVEL OF EDUCATION** : Master II

Contact - guillaume.divrechy@decathlon.com

The internship is a strategy that contributes to the careers of thousands of young people in France and that will enable us to recruit our future talent. A policy that will make Decathlon a major player in the professional and social integration of young people in France.

DECATHLON = an opportunity for a first experience.

Decathlon is committed to inclusion and non-discrimination, and thus acts daily in favor of the disabled, senior citizens, social diversity and equality between men and women. At Decathlon, we recruit personalities above all.

Context and objectives

Decathlon SportsLAB is the department specialized in the study of the body/product interface. We are solicited by Signed Sports (Quechua, Tribord, Kipsta, etc...) to help design better products for users and validate their benefits.

In order to analyze the behavior of sportsmen and women on the field of practice, we wish to explore the new possibilities offered by automated video analysis, enhanced by artificial intelligence (Visual Computing) and adapted to consumer-grade physical media (Smartphones, Webcams, standard PCs, etc.).

The course will take place in different phases :

- **Review of the need,**

In contact with our engineers/researchers, you will identify the most relevant use cases for the use of Visual Computing technology (eligible R&D studies, etc...).

- **Review of the existing,**

You will identify the most promising existing solutions to cover our needs, whether they are finished solutions (mobile APPs, software ...) or development kits (APIs, SDKs).

- **Evaluation,**

You will evaluate in practice the most relevant solutions you have identified. Your expertise will allow you to test and critique turnkey solutions, your development skills will lead you to develop one or more Proof-of-Concepts to build strong convictions.

- **Strategy / Tactics,**

You will identify and submit one (or more) possible and sustainable strategies for integrating Visual Computing into our Research and Development activity

area around sports in motion (integrated skills, delegated skills, partnerships, alliances, etc ...).

Candidate profile required:

- Strong skills in C/C++, C#, Python, Matlab/Octave, Java.
- Mastery of libraries such as openCv, OpenMP or OneApi from Intel.
- Know how to use the GPU mode to perform simulation tasks.
- Knowledge of signal processing (1D/2D/3D/3D+t).
- Knowledge of Machine Learning, Deep Learning
- (RNN, CNN, LSTM) and AI.
- Knowledge of the use of game engines
- (Unity, Unreal Engine).
- Know how to manipulate video streams.
- Knowledge of Pytorch/Keras or TensorFlow is desirable.
- You are passionate about Visual Computing technology, you are hands-on, you are service-oriented, you like to take responsibility and you want to work in a collaborative environment.
- You are motivated by the project, the mission,
- You know how to work in project mode,
- You are capable of federating around a project,
- You have a good capacity to adapt and to explain things to others,
- You are a challenging person who likes challenges,
- You focus on creativity and a passion for entrepreneurship,

This is for you !