Data Science Engineer - Internship

Workplace: 28906, Getafe

Apply online!

What to expect:

Support in the development, maintenance and improvement of Python software for a drowsiness detection system. As an intern, the student will be part will be part of a team focused on the development and implementation of advanced data analysis and processing algorithms to predict drowsiness and fatigue situations in users.

Main responsibilities:

- Physiological and Biometric Analysis: investigate and analyze physiological and biometric factors that contribute to the detection of drowsiness and fatigue, and propose and validate relevant metrics for the evaluation of drowsiness from biometric and video data.
- Algorithm Development and Evaluation: research, develop and optimize image processing and deep learning algorithms for the detection and classification of faces and eyes using industrial libraries such as OpenCV, TensorFlow, PyTorch, Caffe, and MXNet; and develop algorithms for the analysis of video sequences that allow determining the rate and duration of blinking.

What you bring along:

- Degree in Software Engineering, Computer Science, Telecommunication or related degrees.
- Previous experience in academic or personal projects involving Python programming and data analysis is desirable.
- Advanced programming in Python. Knowledge of C++.
- Ability to work independently and in a team, with a proactive and problem-oriented approach.
- Ability to learn quickly and motivation for new technologies.

- Software Development: design and develop a software application on Linux that allows cyclical capture of images in real time, detection and classification of eyes, analysis of video sequences, and historical storage of results; and design the software architecture that encapsulates the stages and functionalities described, ensuring optimal performance and easy integration with other systems.
- Interface and Visualization: design and develop output interfaces that allow viewing the captured image with the processing results and relevant statistical values ⊠⊠superimposed on the image, including notifications of possible drowsiness or fatigue.
- Hardware Integration: analyze and propose the integration of different hardware sensors for the acquisition of additional relevant information, complementing the biometric information processed by the system.
- Exploration of Additional Applications: explore and propose additional applications of the developed technology in other areas that require high precision or operator attention, such as biomedical applications or digital marketing.
- Collaboration and Reporting: collaborate closely with other technical and functional teams to ensure the correct implementation and deployment of the developed solutions; and document and report project progress, including the preparation of technical reports and presentations for stakeholders.

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