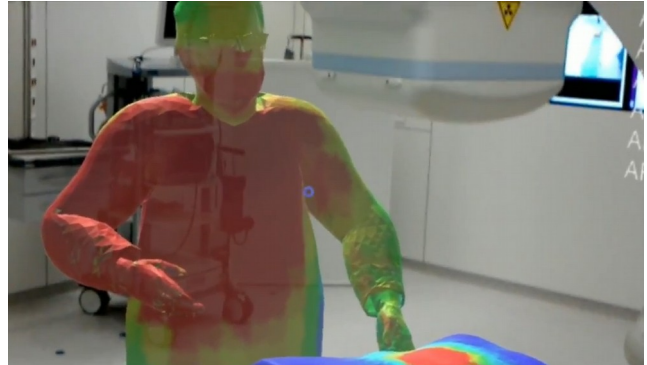


Internship: developing an Augmented Reality tool to visualize X-ray radiations

Located on the campus of Strasbourg's University Hospital, the research group CAMMA aims at developing new tools and methods based on machine learning and computer vision, in order to support the medical staff working in the operating room.

Mission:

With an innovative team, contribute to the development and optimization of an application for the visualization of simulated X-rays in augmented reality. The purpose of this application is to raise awareness about the use of radiations in the operating room for in-situ safety teaching.



Based on the Microsoft HoloLens technology, this application puts you in the context of an intervention relying on radiations, simulated on GPU with the Monte Carlo method. The tests will be performed in a hybrid room equipped with RGBD cameras that will need to be registered with the HoloLens. The communication between the HoloLens and the system will use the protocol Wi-Fi.

Required profile:

Currently a student in your last year of engineering school or master research specialized in computer science, you are looking for an end-of-study internship:

- you are serious and motivated
- you have skills in computer vision
- you are strongly attracted by augmented reality
- you are able to work in a team
- you have good English skills, both written and spoken

Appreciated:

- Experience with C++, C# and/or Unity
- Experience in the development of an AR application, maybe even HoloLens

Duration: 5 to 6 months

Starting date: January-February 2020

Job types: Full-time, Internship

Website: <http://camma.u-strasbg.fr/>

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References:

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N. Loy Rodas, F. Barrera, N. Padoy, **See It With Your Own Eyes: Marker-less Mobile Augmented Reality for Radiation Awareness in the Hybrid Room**, *IEEE Transactions on Biomedical Engineering (TBME)*, Volume: 64, Issue: 2, Pages: 429 – 440, Feb. 2017 ([online version](#)), doi:10.1109/TBME.2016.2560761, 2016

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