

Master thesis/internship position at L3i La Rochelle (France)

We have an open Master 2 or equivalent internship position, at the L3i laboratory of La Rochelle University (France), **on the topic of 3D model comparison**, under the CircularSeas project (<https://circularseas.com>). Below are the details about duration, dates and salary.

Duration: 6 months

Desired hiring date: As soon as possible

Take-home salary: ~550 € / month (legal gratification)

Workplace: L3i laboratory of La Rochelle University, France (<https://l3i.univ-larochelle.fr>)

Keywords: Computer Science, Image Processing, 3D reconstruction, Computer Vision, Pattern Recognition, Object Recognition, 3D mesh comparison

Description of CircularSeas project:

The CircularSeas project is co-financed by the *European Regional Development Fund* through the *Interreg Atlantic Area Programme*. Partner labs from Spain, UK, Ireland, Portugal and France are collaborating to contribute towards an eco-responsible future.

CircularSeas project, with its slogan "*TURNING OCEAN PLASTIC WASTE INTO GREEN PRODUCTS FOR MARITIME INDUSTRIES*", aims at promoting the Green Economy by encouraging the development of eco-innovative or green products, parts and components for the Maritime Industries. The strategy is a combination of the Circular Economy Principles, with the use of Ocean Plastic Waste as a means to develop new green materials and the introduction of new greener materials, and the uptake of an advanced manufacturing technology, 3D printing, which is flexible enough to adapt to the manufacturing conditions required for new eco-innovative small and medium parts and components. The target maritime industries are fishing, auxiliary fishing and aquaculture, shipyard and port management and nautical sports.

You may visit the website to discover more about the CircularSeas project: <https://circularseas.com>

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Internship task description:

Since few months, with the idea to transform a simple smartphone into a real 3D scanner, L3i team has been developing new methods to modelize 3D objects sequence of images, captured with a simple camera. The student will work on the assessment of the quality of the reconstruction by measuring the accuracy of 3D meshes coming from 3D scanning or 3D reconstruction

The internship will start the work with preparing a state-of-the-art of the existing methods and will benchmark some of the best existing algorithms for the above task. Afterwards the student will propose and implement a protocol for testing and evaluating the quality of the 3D-mesh of objects captured by smartphones and scanned by 3D scanner..

Once the above tasks will be accomplished (or in parallel), the internship will work on improving the state-of-the-art and will propose a scientific contribution to answer some of the limitations of existing approaches. We will target a conference and/or journal publication with the proposed innovation.

Candidate's profile:

The candidate should be a master 2 student (or equivalent). in the field of computer science, computer engineering, signal processing or applied mathematics.

Moreover, knowledge or experience on the topic of 3D reconstruction will be appreciated.

The candidate's skill set should include:

- Mastering one or more programming languages (Java, Python, C/C++) and in the use of libraries.
- Very good teamwork skills, having knowledge or experience of Agile methods would be a plus (the work will be carried out both in conjunction with researchers from the L3i laboratory and the other partners)
- Spoken/Written French and/or English and Good scientific writing skills

To apply:

Candidates for this position should send a motivation letter and CV (names and reference details) to:

- mickael.coustaty@univ-lr.fr
- muhammad_muzzamil.luqman@univ-lr.fr
- nicolas.sidere@univ-lr.fr

Applications will be considered as they arise. There is no strict deadline for applying but we are hoping to finalize the selection of a good candidate as soon as possible.

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