Raphaël **Lallement**
AUTONOMOUS-SYSTEMS ARCHICTECT

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Experience

Research Engineer, Robotic and AI expert
PAris-Saclay, France

CEA LIST, EMBEDDED AND AUTONOMOUS SYSTEMS DESIGN LABORATORY
Nov. 2022 - Today

- Confiance.ai: Aims at building trustworthy AIs through modeling, tooling, and validation. The project makes tangible solutions, which industrial partners deploy in operations.
- Robot auto-apprenant: (self-learning robot) Builds a solution around a robot that learns in contact with human operators in indusrty. It is a stepping-stone toward the Industry 5.0, where the factories are meant to be reconfigured on demand.

Project Manager for Drone projects
Toulouse, France

SCALIAN, "UNMANNED" TEAM
Jul. 2018 - Nov. 2022

- Comp4Drones: European project (50 partners), definition of a generic architecture for drones, createion of drones ecosystem. Role: Workpackage leader. Management of deliverables and internal developments. Organisation of partners' activities.
- Metis: project for Total company, Fleet of cooperative drones dropping sensors on huge areas. Role: Project manager. Management of deliverables and development team. Review meeting and defense of our company interests. Supplier selection and management.
- Technical support to development team: containerisation (Docker), Continuous Integration, cross-compilation.
- Answer to Requests for Proposal: definition of system architecure and cost/price estimation, business plan.

Co-Founder and CTO of Elter, an AI company
Toulouse, France

AI COMPANY IN MACHINE-LEARNING, COMPUTER VISION AND TASK PLANNING
Nov. 2016 - Feb. 2018

- R&D in computer vision and task planning: study of feasability and corresponding market study.
- Answer to innovative-project calls: private investor and public research (ANR).
- Participated in commercial and legal-status activities.
- Co-Founder of a commission around data valorisation in the Digital Place cluster.

PhD in Artificial Intelligence for Robotics, LAAS-CNRS and University of Toulouse
Toulouse, France

SYMBOLIC AND GEOMETRIC PLANNING FOR TEAMS OF ROBOTS AND HUMANS
Oct. 2012 - Oct. 2016

- Formalisation of a novel algorithm to ensure geometric feasibility of a symbolic task plan.
- In the context of the ARCAS European project, where a team of UAV has to build structures with cooperative transport operations.
- Other case study is Human-Robot Interaction in the context of collaborative factory assembly work.
- Publication of 5 peer-reviewed article in international workshops and conferences.
- Part-time lecturer at INSA (Unix systems, C and Ada programming, processor design).

Master-2 validation Internship, LAAS-CNRS
Toulouse, France

IMPROVEMENT OF AN INNOVATIVE ROBOTIC ARCHITECTURE TO ALLOW MULTI-ROBOT SYSTEM
Mar. 2012 - Aug. 2012

Find more on Linkedin: desgin of robotic-hand simulator, scientific publications, ...

Competences

Languages
Native French
Bilingual English

Project management skills
Projects structuring (PMP) and answer to RFP, deliverables writing, technical specification, supplier selection and management, quality management, technical support and lead

Research skills
Analyse of the state of the art, scientific-articles writing, conception and formalisation of novel ideas

Programming skills
C++ and boost, CMake, ROS, Git, Gitlab CI, Makefile, Prolog
Knowledge in: Matlab/Octave, Java, VHDL

General computer skills - DevOps
Linux administration, virtualisation and dockerisation, shell scripting, code licensing, CI integration

Interests
Travel (Japan, Iceland, Indonesia, ...), home beer brewing, board games, French Robotics Contest, blacksmithing