LOUIS RUBLÉ

〈 PhD Researcher — Conversational AI, Human-Robot Interactions 〉

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EDUCATION

PhD in Computer Science — Oct 2026 – Oct 2029 (expected)
Sorbonne Université, France

Master of Engineering in Computer Science — Intelligent Systems — 2022 – 2026
Université de Technologie de Compiègne, France

2-year University Diploma in Electrical & Computer Engineering — 2020 – 2022
IUT de Cachan, France

WORK EXPERIENCE

Incoming PhD Researcher — Social AI — Oct 2026 – Oct 2029 (expected)
ISIR, Sorbonne Université — **Paris, France**

- Working on **turn-taking models** and interruption management for Social Interactive Agents (SIA), within the ANR INSPIRE-bis project, under the supervision of Catherine Pelachaud.

Robot Operator — June 2026 – Sep 2026
Universal Mechanical Assistant (UMA) — **Paris, France**

- Operated robots, collected task-specific data, and provided behavioral feedback to engineers.

Humanoid Robot Teleoperation Research Intern — Oct 2025 – Apr 2026
AIST-CNRS Joint Robotics Laboratory (JRL) — **Tsukuba, Japan**

- Designed a user study protocol evaluating the effect of **RGB-D augmented feedback** on humanoid teleoperation performance and operator cognitive load.
- Built an **automated metric extraction pipeline** combining RGB-D calibration, zero-shot container detection (DINOv2 + SAM), and volumetric fill-level estimation.
- Refactored a **shared-autonomy intent detection framework** (HMM, YOLOv11-seg, Llama) for on-robot deployment, improving real-time inference speed by 27.5%.

Social Robotics Engineer Intern — Sep 2023 – Feb 2024
Enchanted Tools — **Paris, France**

- Developed a **multimodal active speaker detection** system combining facial landmark tracking, ASR, and Speech Source Localization (SSL).
- Designed and shipped novel **social behaviors** for the Mirokai robot platform using Godot and C++, integrated into production deployment.

Software Engineering Intern — Computational Imaging — May 2022 – Aug 2022
Laboratoire Signaux & Systèmes (L2S) — **Gif sur Yvette, France**

- Ported and optimized an **image reconstruction algorithm** in Python, reducing computational runtime.

SKILLS

- **Programming:** Python (primary), C/C++, Matlab
- **Libraries & Tools:** PyTorch, OpenCV, ROS, Git, Linux, Gazebo
- **Voice & Conversational AI:** streaming STT, TTS, LLM inference & orchestration (Pipecat)
- **Languages:** French (Native), English (Professional), German/Spanish (Beginner)

PUBLICATIONS (in progress)

In preparation (2026): *A Reproducible Vision-Based Framework for Evaluating Humanoid Teleoperation Performance* — L. Rublé, M. Benallegue, R. Cisneros, A. André — SII 2027