

KILIAN ROIG

Software Engineer

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PROFESSIONAL EXPERIENCE

Software Engineer

ASE OPTICS EUROPE

 Jun 2025 – Sept 2025

 Barcelona, Spain

SKYFUSION & ECOSWIR

- Worked on **R&D software projects** focused on perception systems, sensor data processing, and automated inspection platforms
- Designed and developed **backend** and data-processing applications in **Python** for multi-sensor systems
- Contributed to **system design** and implementation of **client-server** solutions

Software Engineer

INDRA ESPACIO S.A.

 Sept 2022 – May 2025

 Barcelona, Spain

ECHOES – Startical

- Developed and maintained **C++/Qt software** for an aeronautical communication system
- Investigated and resolved defects in core components, improving system stability and reducing critical incidents
- Designed, implemented, and validated new features using simulation-based test campaigns

ROUTLEO – Startical

- Contributed to the development of a custom routing solution implemented in **Python**
- Reimplemented and optimized the routing solution in **C**, focusing on real-world constraints and performance
- Python tooling** for simulation, analysis, testing, and automation
- Executed system-wide test campaigns and produced technical documentation

EDUCATION

Bachelor's Degree in Computer Engineering Specialization in Information Technologies

Universitat Politècnica de Catalunya (UPC)

 2018 – 2022

 Barcelona, Spain

COURSES & CERTIFICATIONS

Professional Training

INDRA SISTEMAS S.A.

- Operating Systems Fundamentals for Communication Systems – 40 hours
- C++ Programming – 40 hours
- Introduction to IP Networks – 40 hours
- Introduction to Docker and Kubernetes – 40 hours

SKILLS

Principal

- Programming Languages: Python, C, C++, Bash
- Cloud & DevOps: Docker & Docker Compose, CI/CD (GitHub Actions), AWS
- Networking: TCP/IP, UDP, LAN, VLAN, NAT, SDN, DNS
- Other: Qt, Git, PyTest, Wireshark
- Languages: Spanish (native), Catalan (native), English (B2)

Secondary

- Backend technologies: Node.js (JavaScript), FastAPI (Python)
- API styles: REST, WebSockets
- Data storage: Relational, MongoDB

PROJECTS

Recruitment Web Platform

Full-stack web application with Node.js REST API, React frontend, authentication and basic security practices.

2021 – 2022 · Barcelona, Spain