Adrien Cosson
Software Engineer

Lyon, France
(+33)6 98 19 59 60
adrien@cosson.io

🌐 cosson.io   AdrienCos   adriencosson

Professionnal and Academic Experience

Rtone IoT Makers - Embedded Software Engineer   Jan 2021 - Current
- Developed and deployed Docker-based Azure IoT modules written in Python (using FastAPI, Flask, and Pytest).
- Designed CI/CD pipelines on Azure DevOps and Gitlab CI to automate the development of these modules.
- Created a bespoke Yocto-based embedded Linux OS, and deployed it on a fleet of 18,000+ devices.
- Built automated monitoring tools to oversee, diagnose, and repair tens of thousands of devices at once.
- Improved the reliability of Rtone's internal infrastructure using Ansible, by setting up periodic server backups, configuring a hardened reverse-SSH bastion, or installing a linting CI pipeline.
- Implemented some best-practices for Python programming, by developing and maintaining a standardized template that provides sane default configuration for multiple tools (for linting, testing, formatting, etc.).

SIIS Lab (Systems and Internet Infrastructure Security) - Research Assistant   Aug 2018 - Aug 2020
- Investigated a new intrusion detection framework for IoT network and embedded environments, in the SIIS Lab under the advising of Pr. Patrick McDaniel.
- Designed Watchtower, a monitoring tool aimed at aggregating low-level OS information of IoT devices.
- Implemented Sentinel, a Linux Kernel Module exposing the hardware information used by Watchtower.

Pennsylvania State University - Teaching Assistant   Jan 2019 - Aug 2019
- Created and graded assignments and exams for 200+ student courses, along with 3 other TAs.
- Gave multiple hour-long lectures on Operating Systems and Systems Programming topics.
- Held in-person bi-weekly office hours to help students work through their assignments.

MBDA France - Data Analysis Intern   May 2017 - Oct 2017

Education

Pennsylvania State University, USA - M.S. in Computer Science.   **GPA 3.85 / 4.00** | Aug 2018 - Aug 2020
Australian National University, Canberra, Australia - Exchange semester. | Jan 2018 - May 2018
École Centrale de Lyon, France - B.S. in Engineering.   **GPA 3.90 / 4.00** | Sep 2015 - Aug 2020

Skills

Programming Languages	Computer Skills	Languages
Python | C | C++	DevOps | CI/CD | Ansible	French
Rust | ARM Assembly	Embedded Linux | Docker	English

Projects & Leadership

Centrale Lyon Cosmos   Sep 2016 - Jul 2017
Software Lead for CTR-02, a supersonic rocket developped by a team of 15 students.

Centrale Lyon Cosmos   May 2016 - Apr 2017
Software Lead of the acoustic measurment unit of SERA-3, an experimental rocket sponsored by the CNES, built by a team of 60 students, and launched from the Kiruna Space Center, Swenden in 2017.

FabLab Centrale Lyon   Sep 2016 - Dec 2017
Co-founder, manager, and treasurer of the Fablab, overseeing a team of 10 students, and managing a budget of 250,000€.

Awards & Scholarships

CSE Department, Penn State   May 2019
Outstanding TA Award

Australian National University   Jan 2018
ANU Excellence Scholarship