LYDIA AIT OUCHEGGOU

Guest Researcher at NIST, PhD student at ENSTA

Researcher in Computer Science focusing on network systems and intelligent caching. Enthusiastic about applying research to real-world systems and contributing to cutting-edge network infrastructure development.

lydia.aitoucheggou@nist.gov ✉

+1 240-796-3968 📱

lydianosali.github.io

linkedin.com/in/lydiaaitoucheggou 🔗

github.com/LydiaNosali 🔗

Google Scholar 🔍

SKILLS

Programming: Java, Python
Network: IPv4/IPv6, BGP, OSPF, EIGRP, RIP, DNS, DHCP, NTP, NAT, QoS, MPLS, VLAN
Virtualization: VMWare, VirtualBox, QEMU

Data science: Machine Learning, Deep Learning
Collaboration Tools: GitHub, MS Office, Trello, Gantt
Soft skills: Public speaking, Research Communication, Technical Writing

PROFESSIONAL EXPERIENCE

Guest Researcher
National Institute of Standards and Technology (NIST)
Oct 2021 - Present
Maryland, USA

- Contributing to the backend development of Multiverse, a Quantum Optical Network Management Software, using a microservices architecture for efficient quantum network management.
- Performing rigorous testing and debugging to ensure code quality and system reliability.

Graduation Internship
Inria Rennes & Lab-STICC ENSTA
Mar 2021 - Dec 2021
Brest, France

- Implemented a policy for IoT and Streaming Data placement in Fog infrastructure, optimizing resource utilization and data availability.

Mobile Application Developer
Omotion Technologies
Feb 2019 - Jan 2021
Remote

- Developed and deployed Flutter-based Android applications for commercial use.

Web Developer
Al Salam Bank Algeria
Sep 2019 - Oct 2019
Algiers, Algeria

- Built an internal web portal for the bank's customer operations

EDUCATION

PhD in Computer Science
ENSTA, Institut Polytechnique de Paris
Mar 2022 - Present
Brest, France

Master's Degree in Embedded Software Systems
University of Western Brittany - UBO
Sep 2020 - Sep 2021
Brest, France

Engineering Degree in Computer Science
Ecole nationale Supérieure d'Informatique (ESI)
Sep 2016 - Oct 2021
Algiers, Algeria

PUBLICATIONS

- Ait-Oucheggou, L., et al. "QM-ARC: QoS-aware Multi-tier Adaptive Cache Replacement Strategy," Future Generation Computer Systems, 2025.
- Ait-Oucheggou, L., et al. "Investigating Multi-tier and QoS-aware Caching based on ARC," MASCOTS 2023, IEEE.
- Ait-Oucheggou, L., et al. "When IoT Data Meets Streaming in the Fog," IEEE ICFEC 2022.

LEADERSHIP & VOLUNTEERING

- Vice Chair, IEEE ComSoc Washington DC Chapter (2023-Present)
- Secretary, IEEE EMBS Washington DC Chapter (2023-Present)
- SCinet Student Volunteer, Supercomputing Conference SC23

CERTIFICATIONS

- CISCO CCNA1: Networking Basics
- CISCO CCNA2: Routing and Switching
- Advanced diploma in French (DELF B2)

PAPER REVIEWS

ASP-DAC, DAC, MASCOTS, Cluster Computing Journal, Infocommunications Journal

LANGUAGES

English(fluent), French(fluent), Arabic(fluent), Tamazight (Native)